



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company Kerr-McGee Oil & Gas Onshore, L.P.
Well Bat 28N-9HZ
Field Wattenberg
County Weld
State Colorado

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Location: API #: 05-123-41286
SEC 9 TWP 1N RGE 65W
Permanent Datum Ground Level Elevation 4931'
Log Measured From Kelly Bushing 25 FT
Drilling Measured From Kelly Bushing
Other Services
Elevation
K.B. 4956'
D.F. 4955'
G.L. 4931'

Date	03-AUG-2015
Run Number	One
Depth Driller	11899 FT
Depth Logger	7532 FT
Bottom Logged Interval	7514 FT
Top Log Interval	Surface
Open Hole Size	8.750"
Type Fluid	Water
Density / Viscosity	8.34 lbm/gal
Max. Recorded Temp.	233°F
Estimated Cement Top	35 FT
Time Well Ready	ROA
Time Logger on Bottom	9:30 A.M.
Equipment Number	HD-0119
Location	Ft. Lupton, CO
Recorded By	J. Morrison
Witnessed By	Josh Gustafson

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
Casing Record	Size (in)	Wgt (lbs/ft)	Grade	Top	Bottom		
Surface Casing	9 5/8	36	J-55	Surface	1557 FT		
Intermediate #1	5 1/2	17	P110	Surface	12109 FT		
Intermediate #2							
Liner				Marker Joint	6630 FT-6652 FT		

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

Log ran as per customer request

Casing Tally reported Marker Joint at 6637'

Recorded Marker Joint at 6630'-6752'

Log ran from as deep as possible in heel to surface

Log ran with 2800 PSI surface induced pressure

Logging tools were clean and free of debris upon completion of operations

Thank you for choosing FMC Technologies Completion Services, Inc.!!

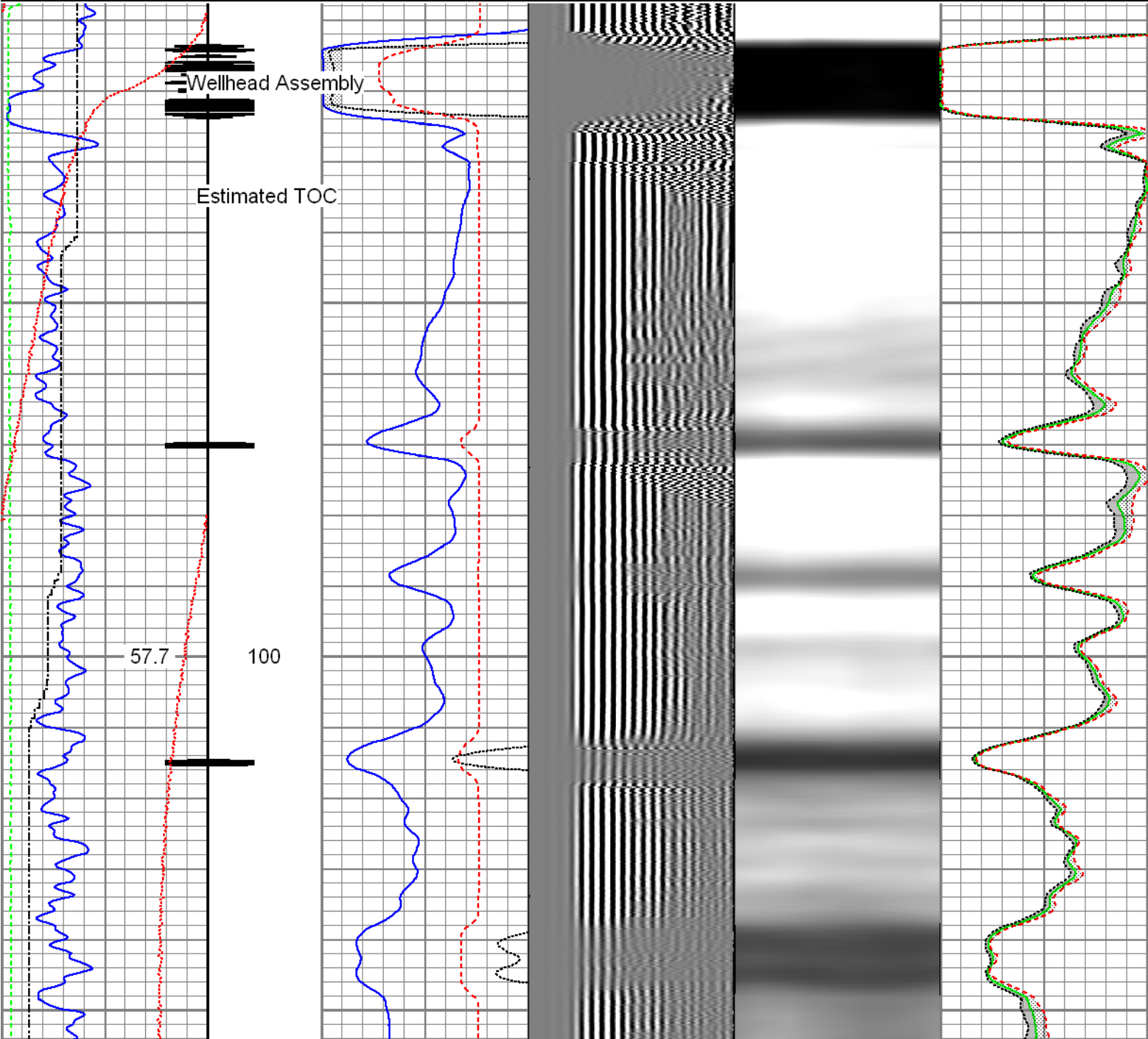


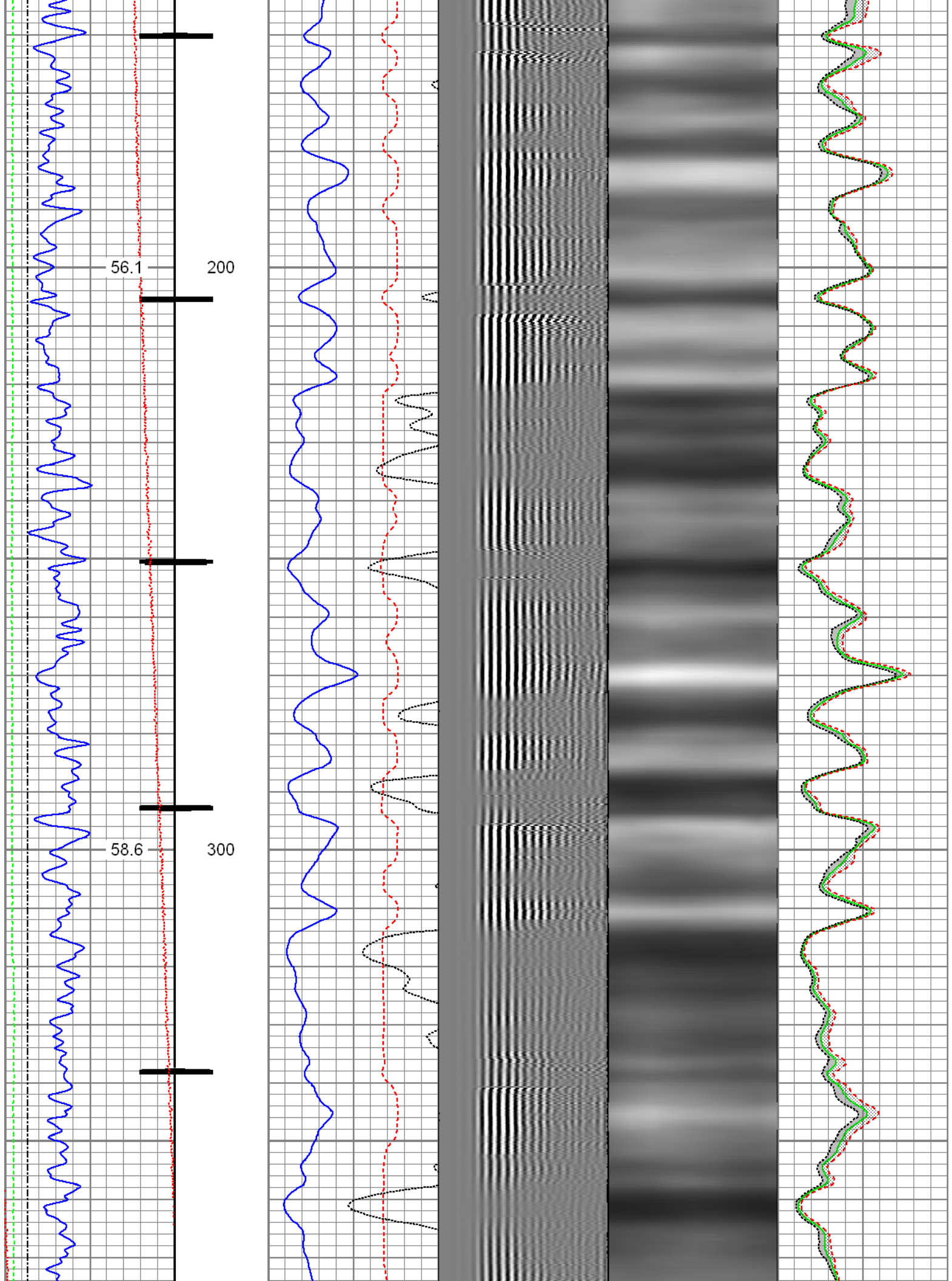
Main Pass

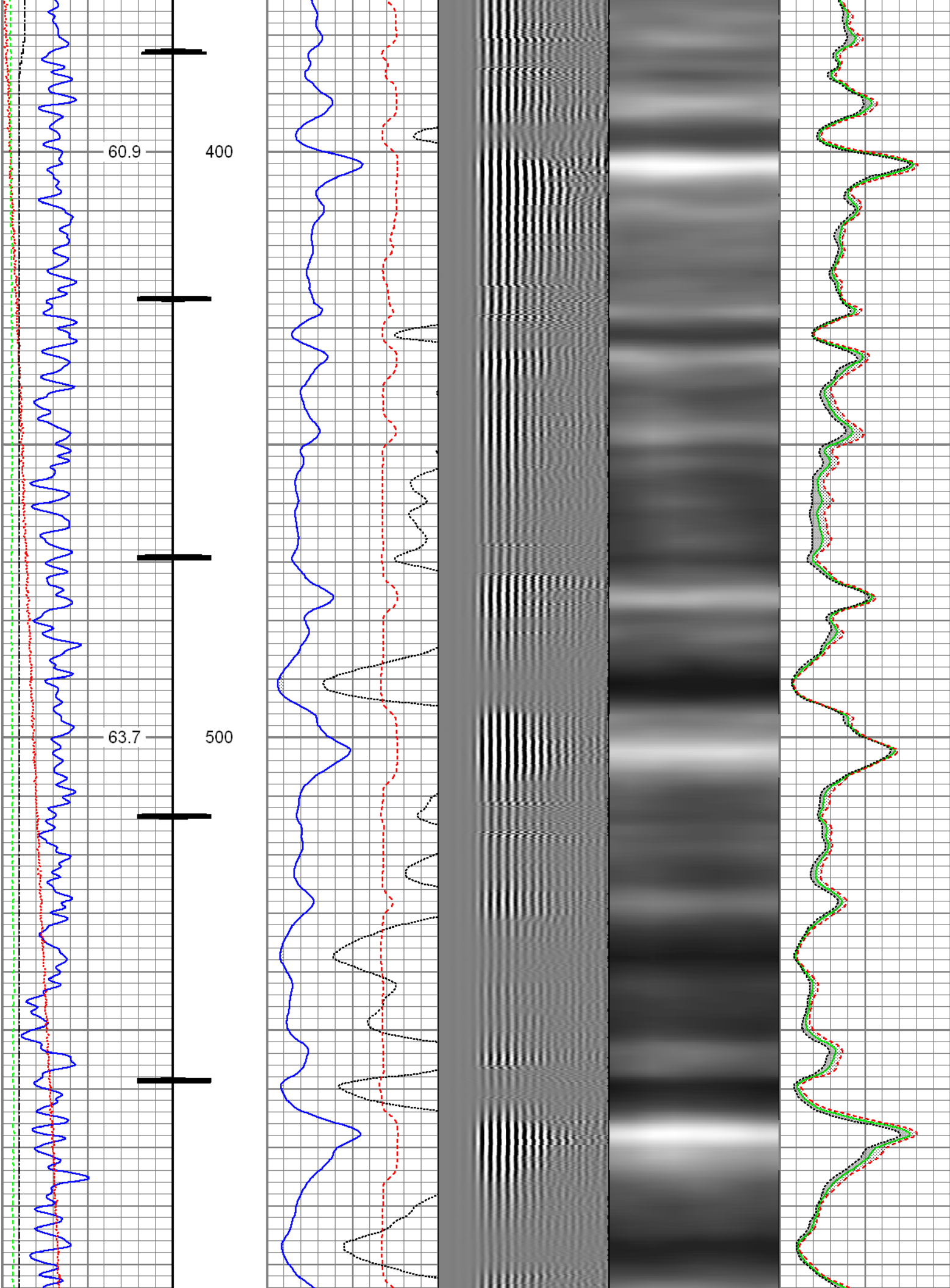
Recorded with 2800 PSI Surface Induced Pressure

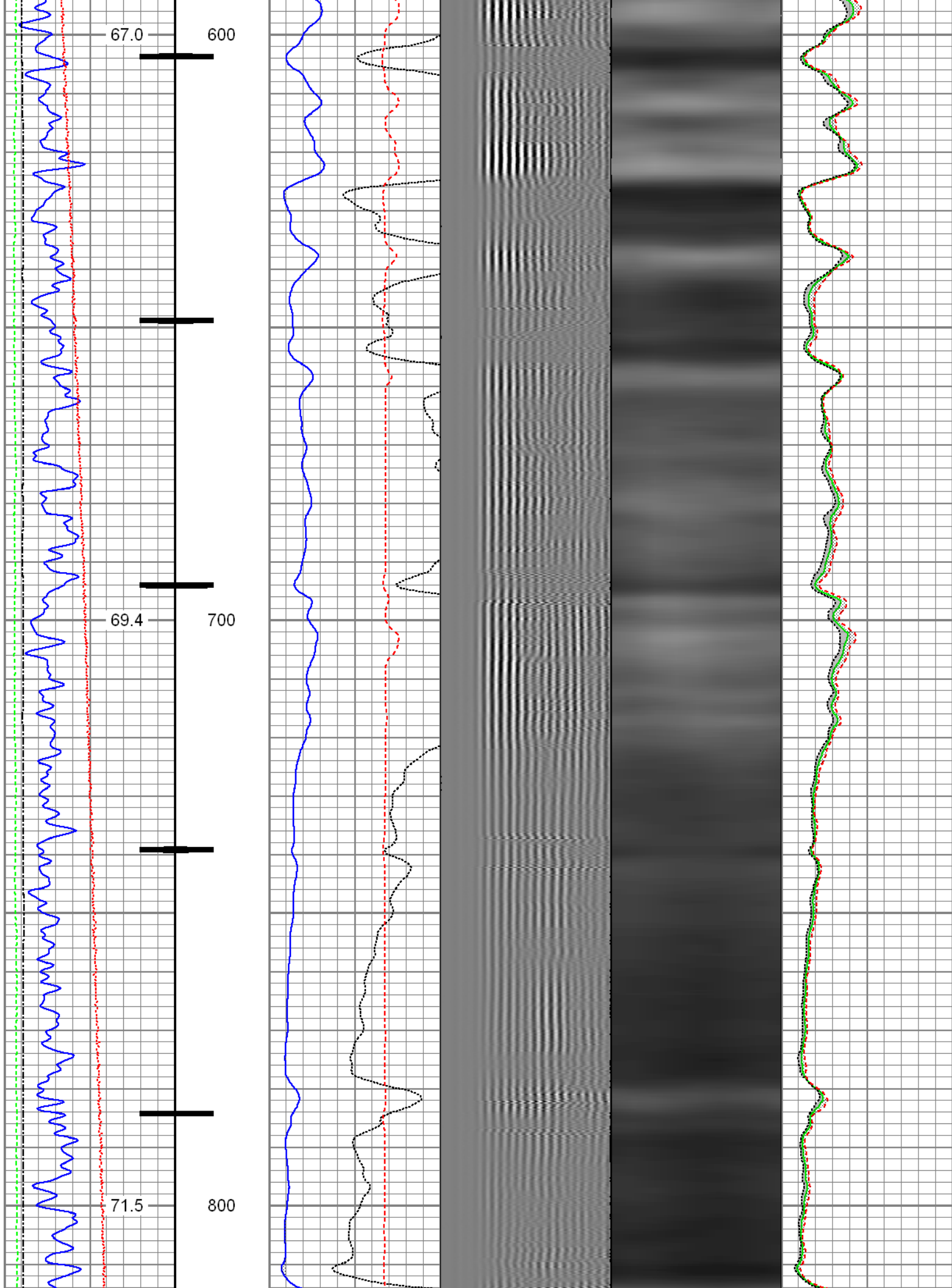
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Dataset Pathname: main.3
Presentation Format: radii
Dataset Creation: Mon Aug 03 12:12:16 2015 by Calc 7.0 B1
Charted by: Depth in Feet scaled 1:240

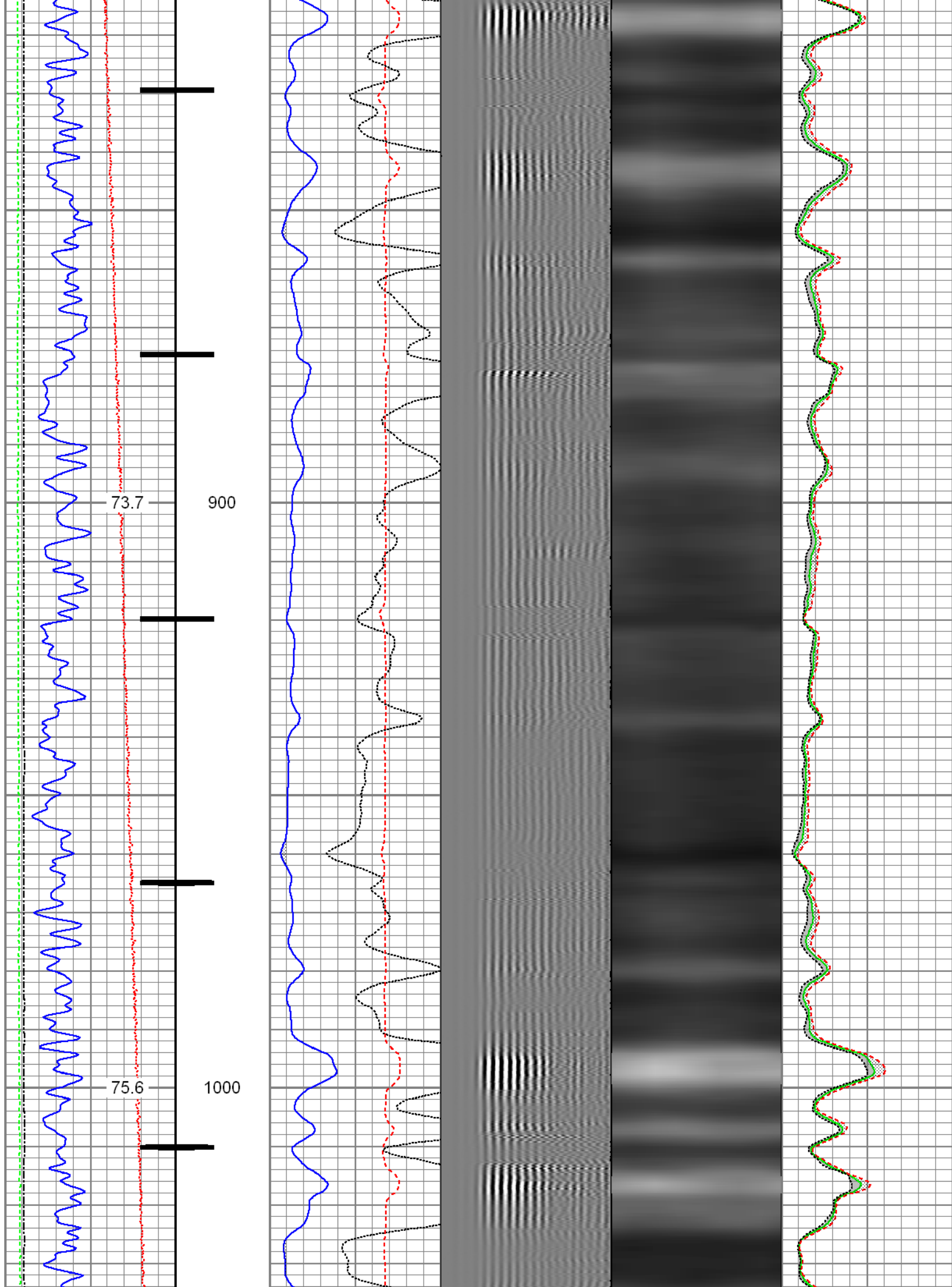
Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120	0 (mV) 100	200 1200		0 100
Casing Collar Locator	3' Amplitude x 5			Minimum Amplitude
Temperature	0 (mV) 20			0 100
0 (degF) 20	3' Travel Time			Maximum Amplitude
Line Speed	650 (usec) 150			0 100
-150 (ft/min) 150				
Line Tension				
0 (lb) 2000				

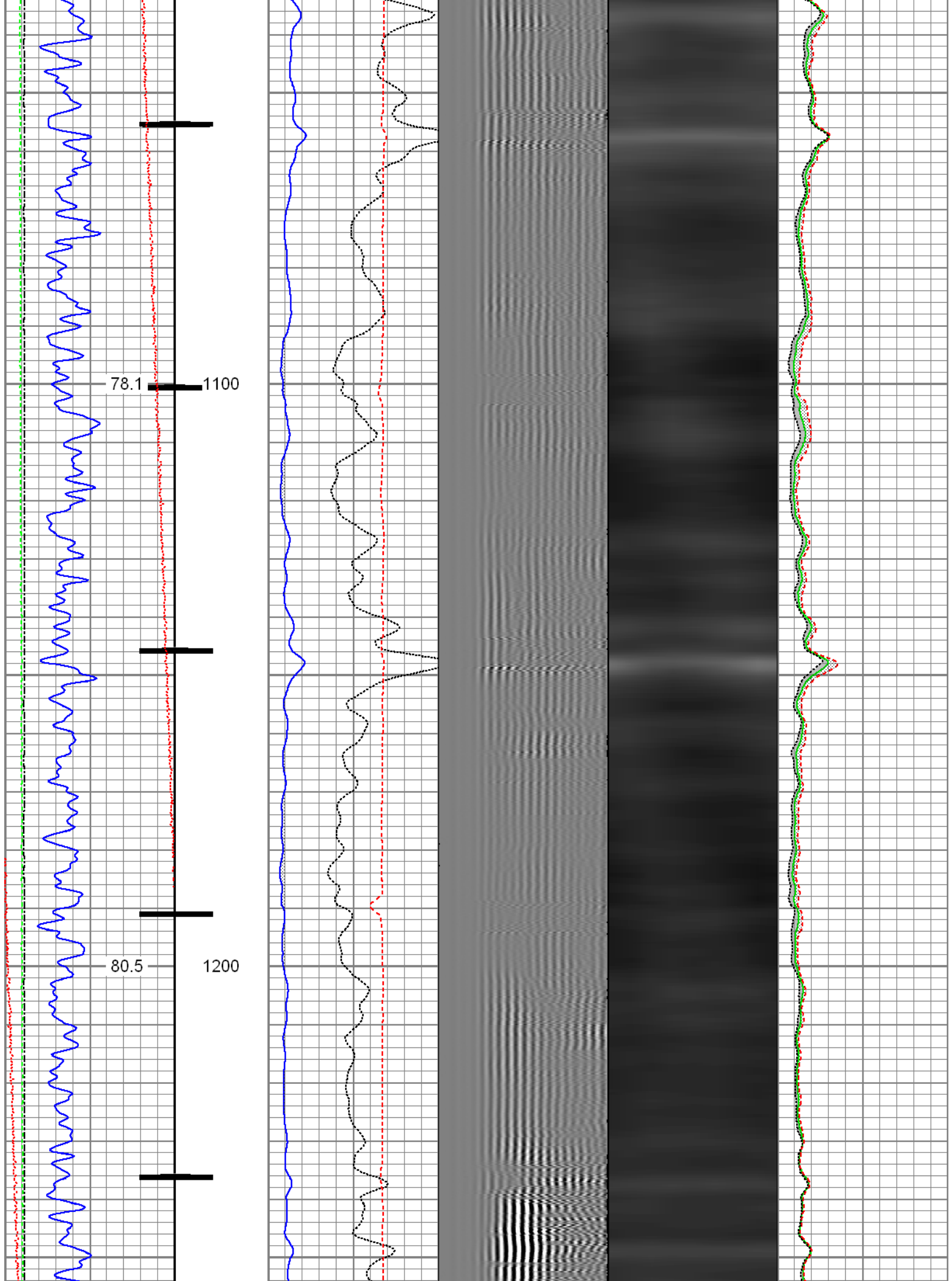


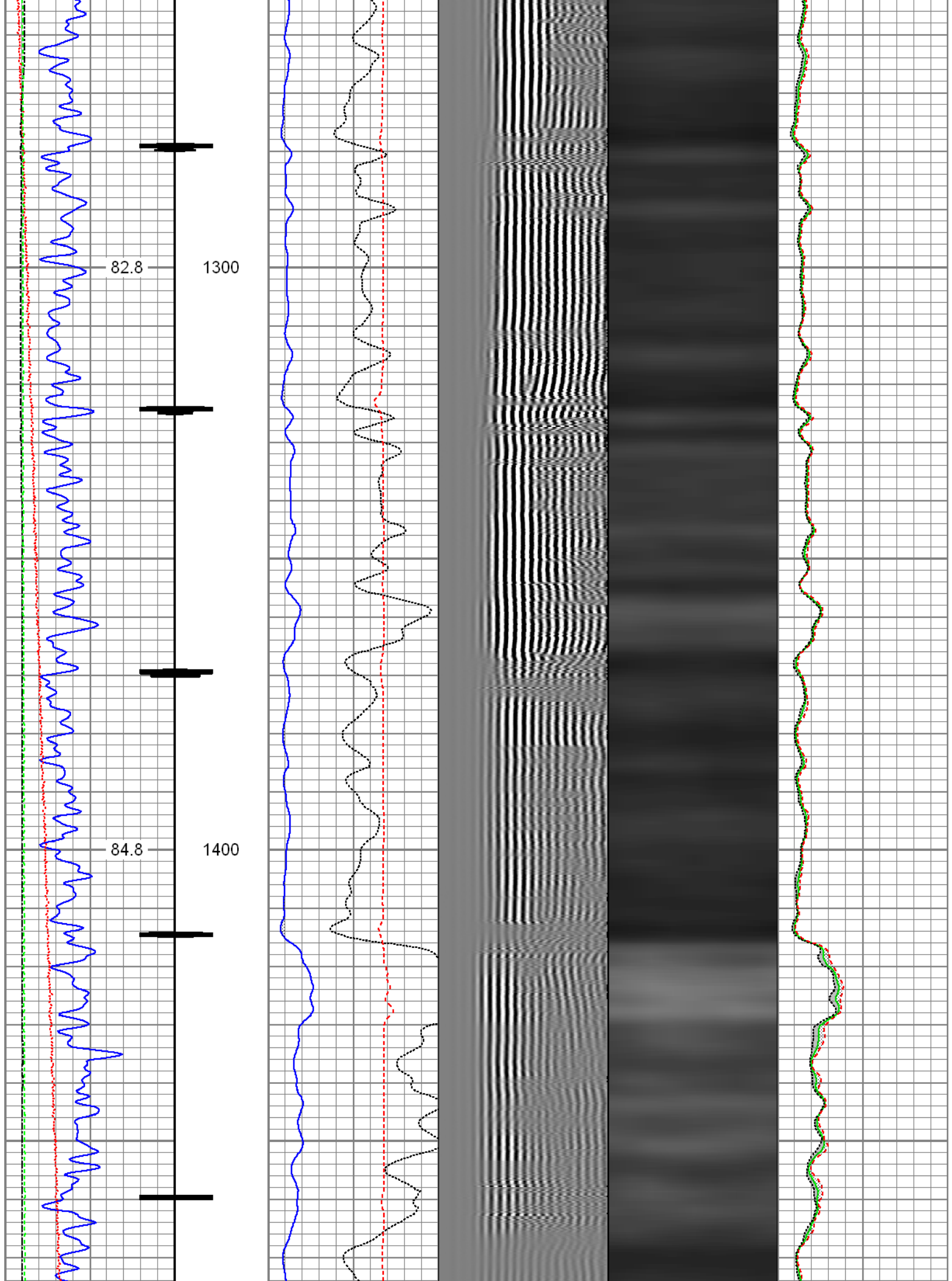


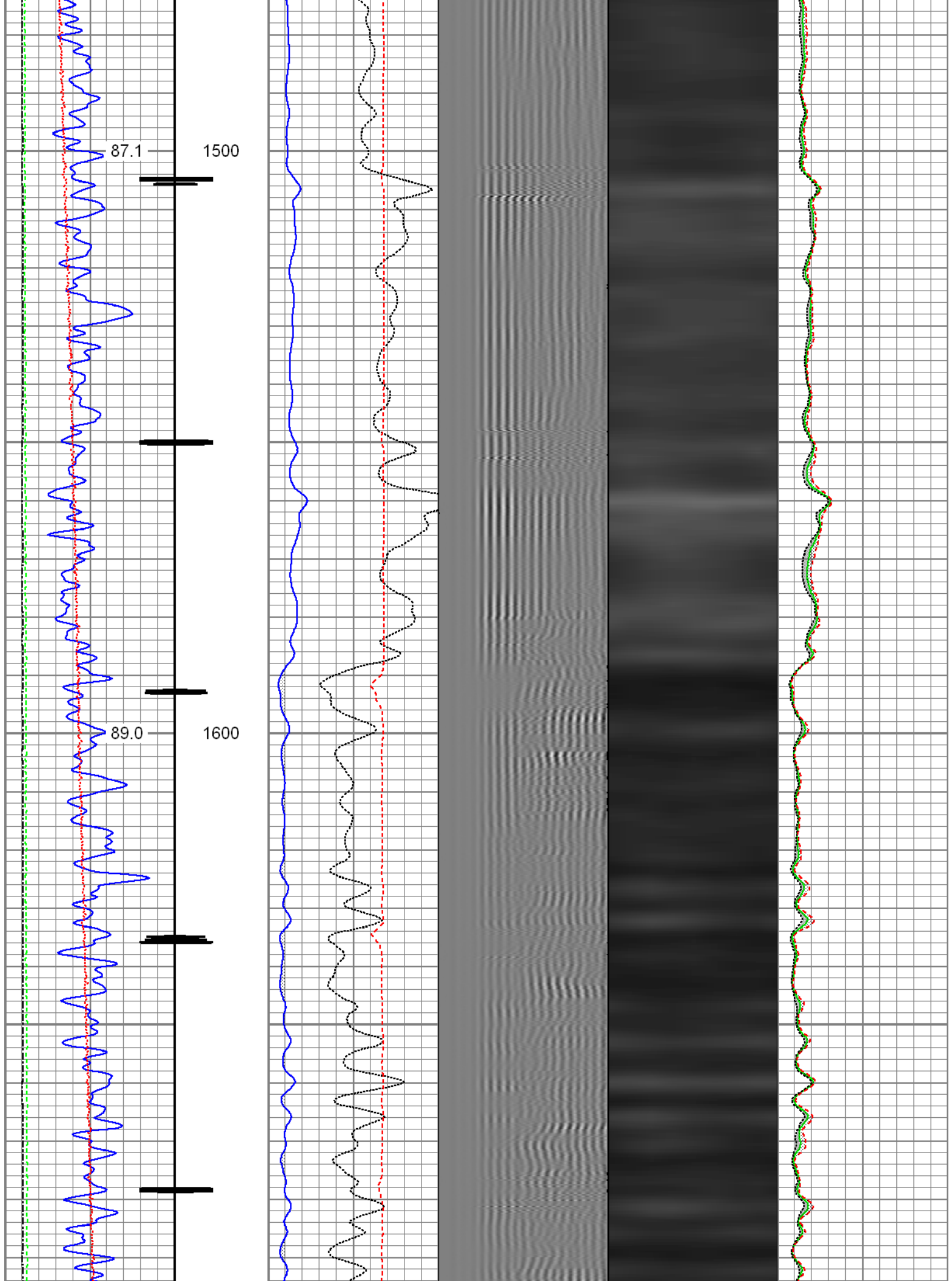


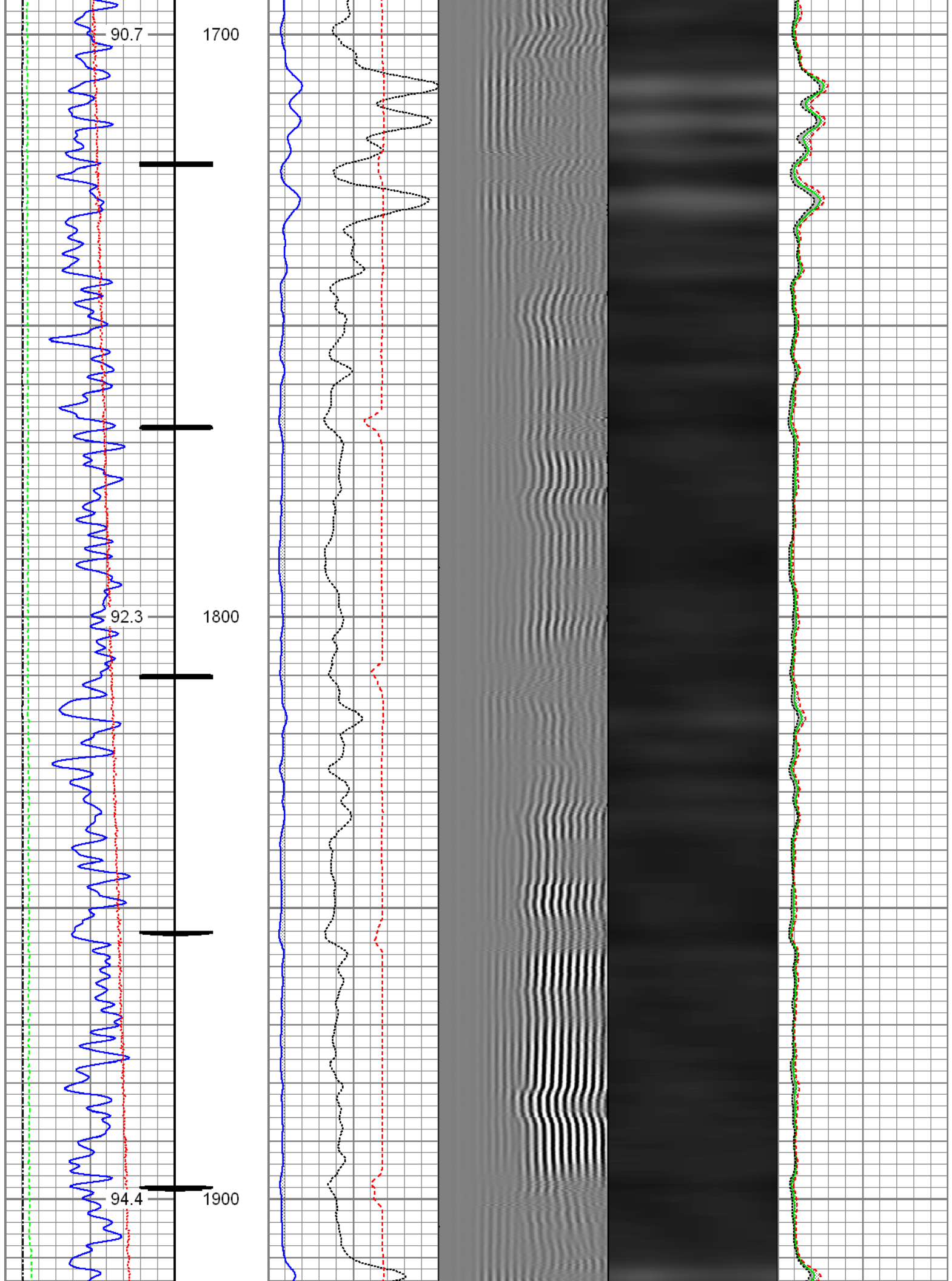


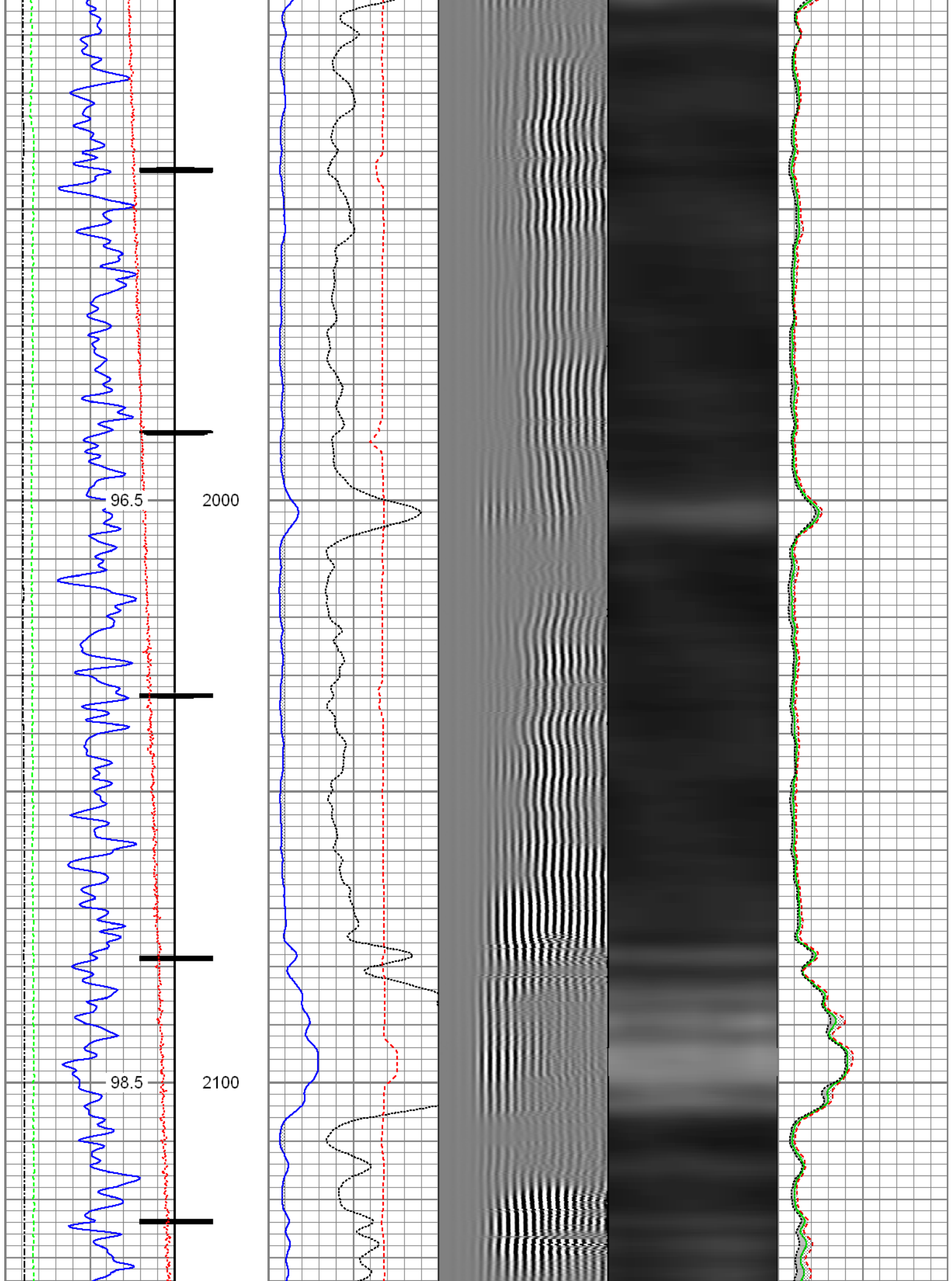


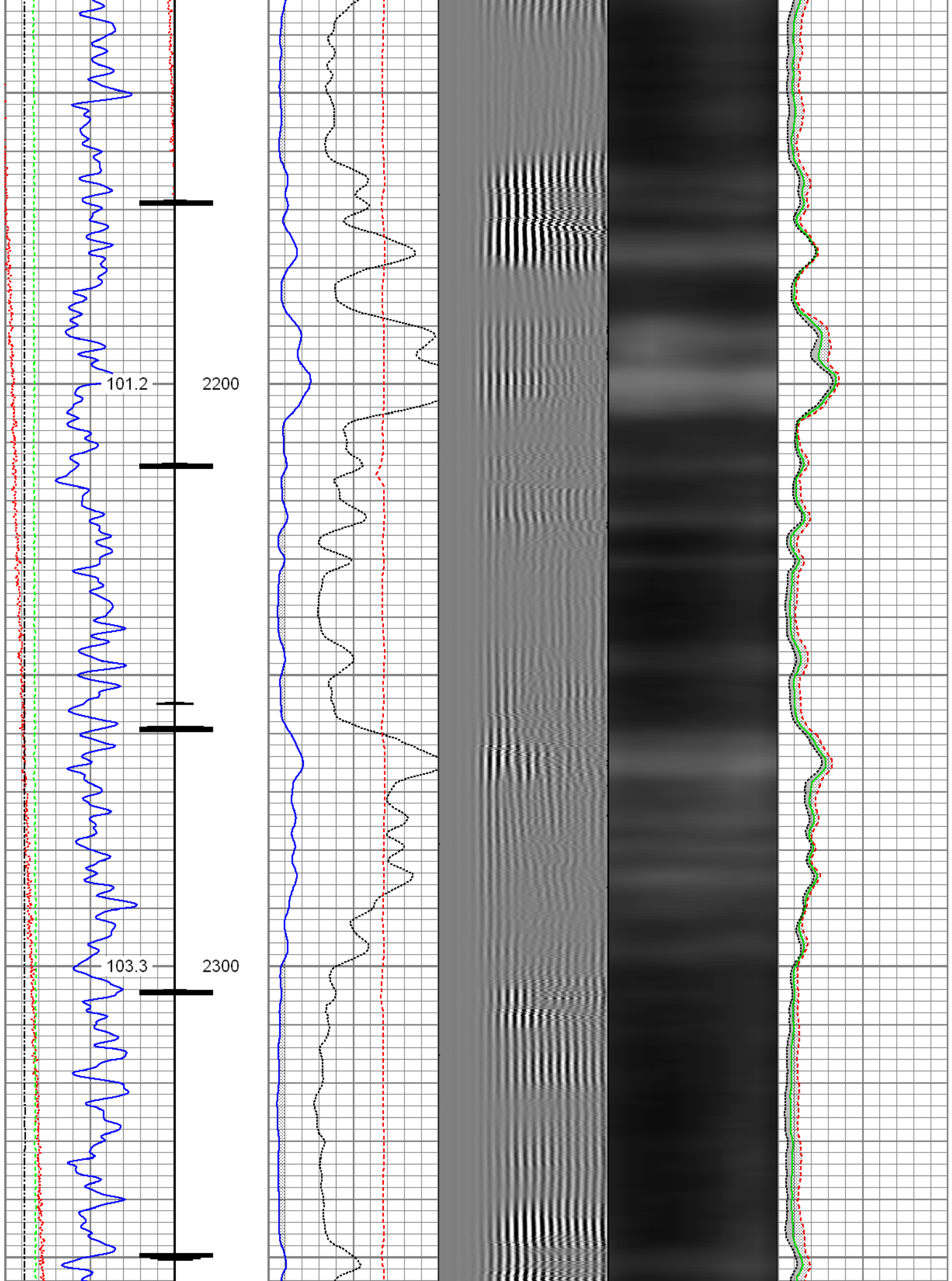


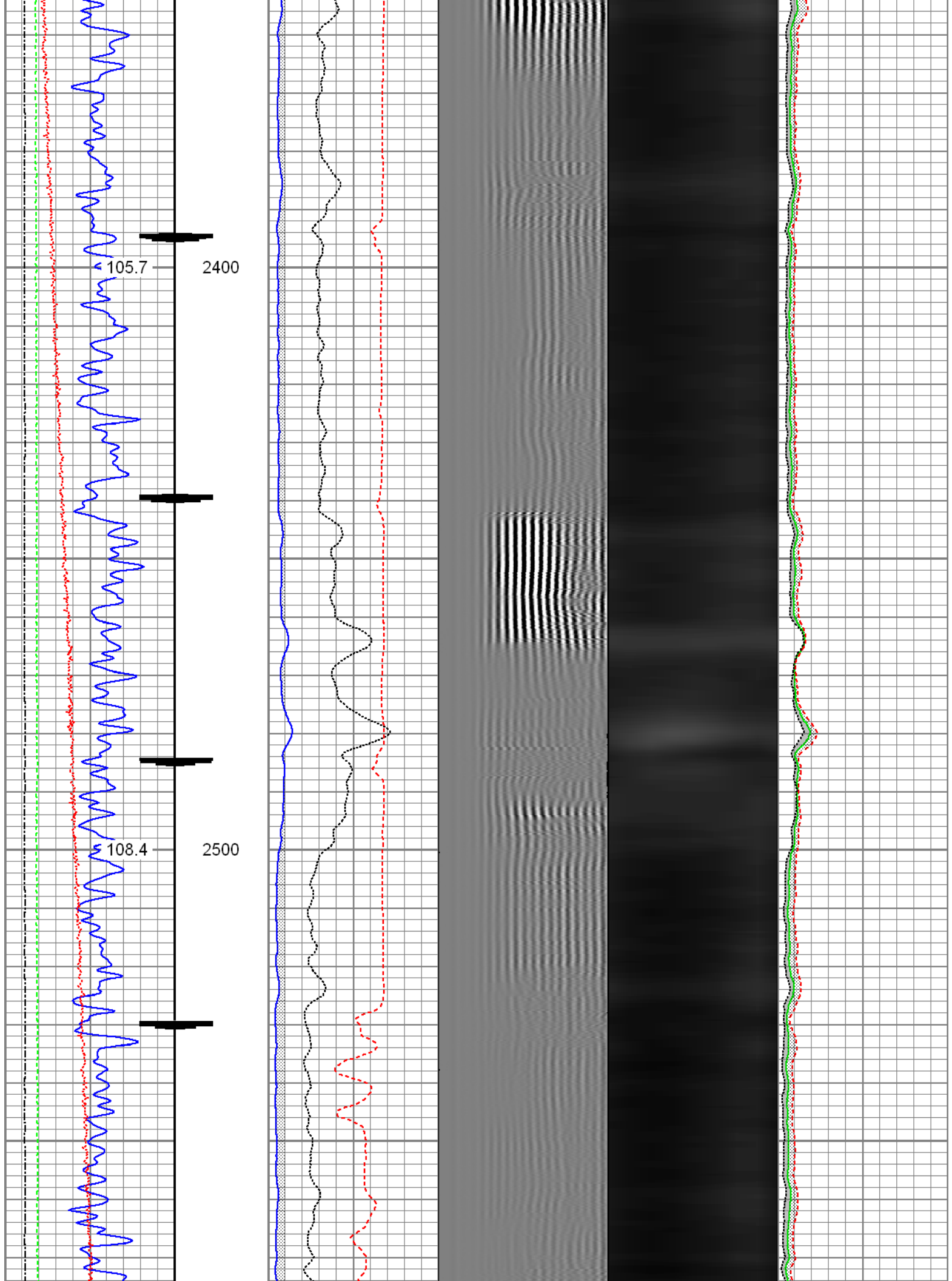


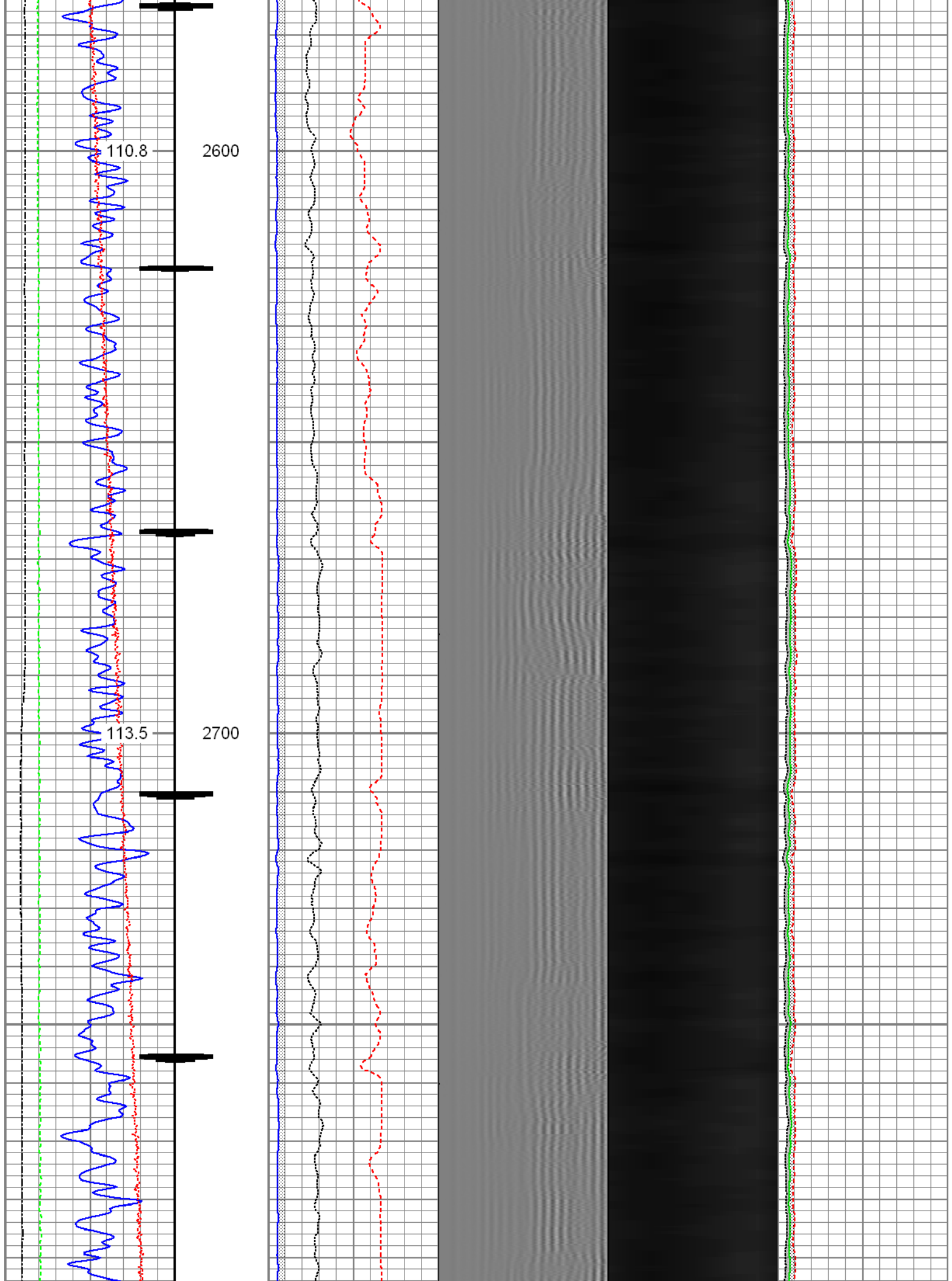


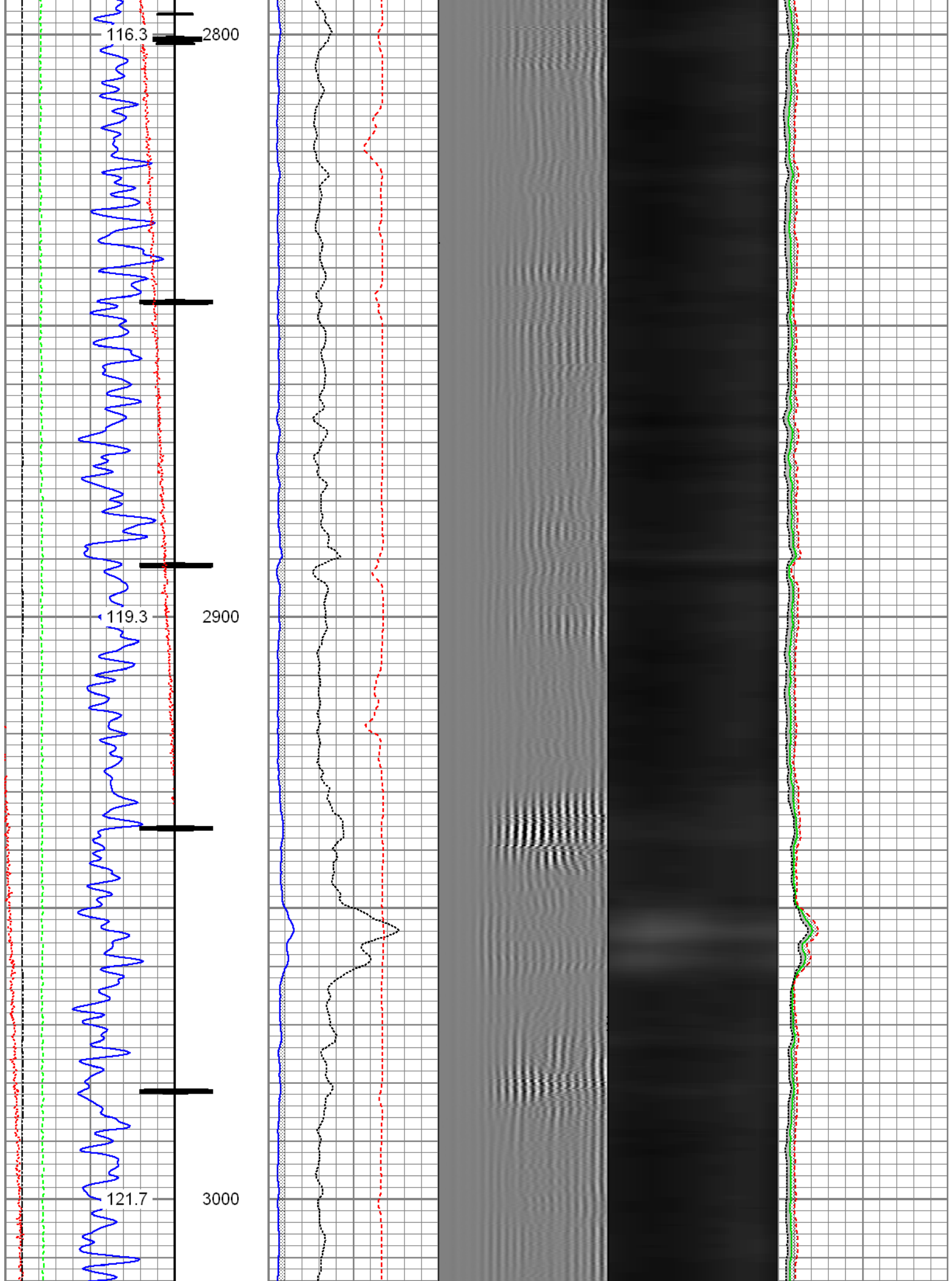


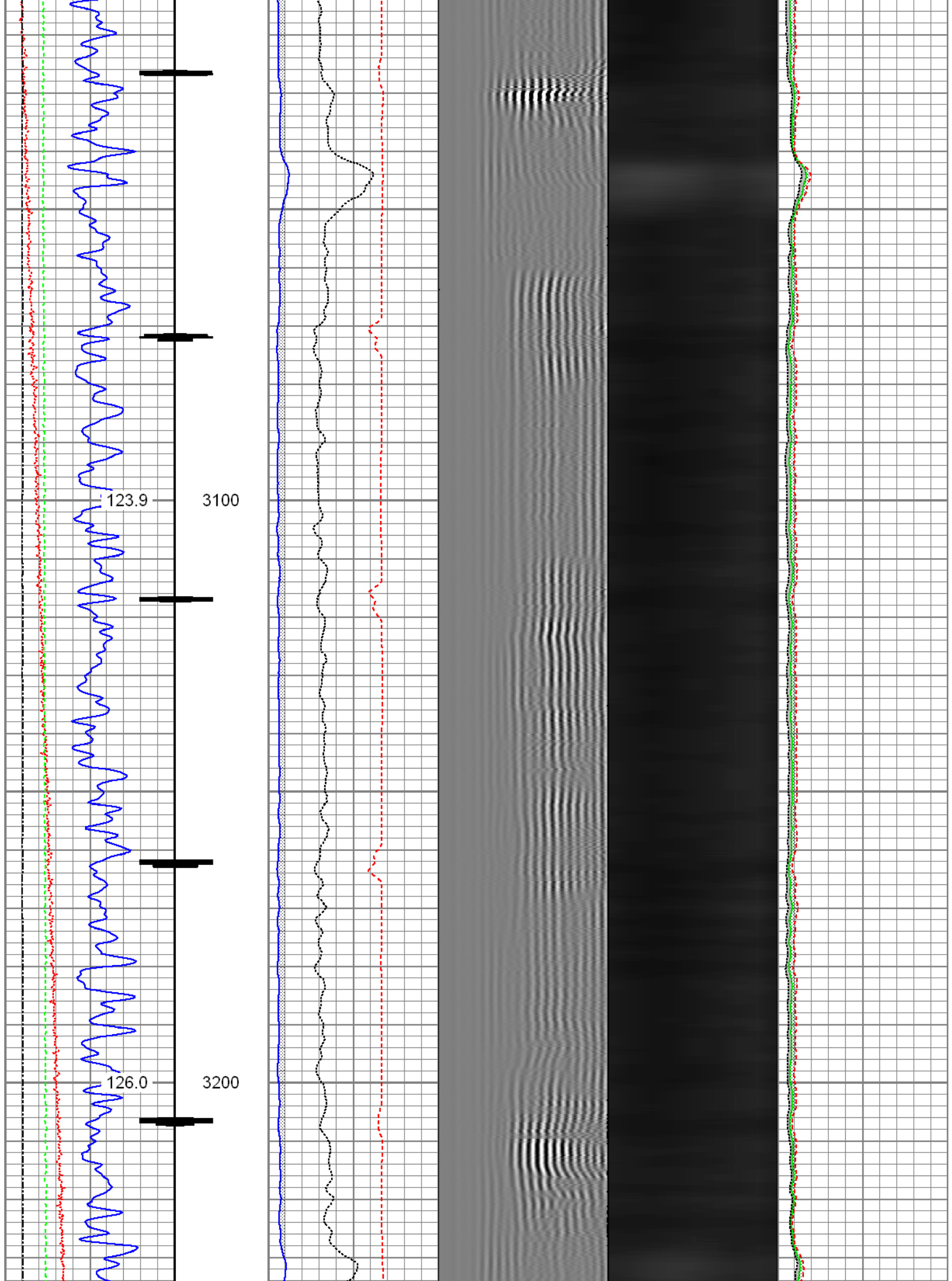


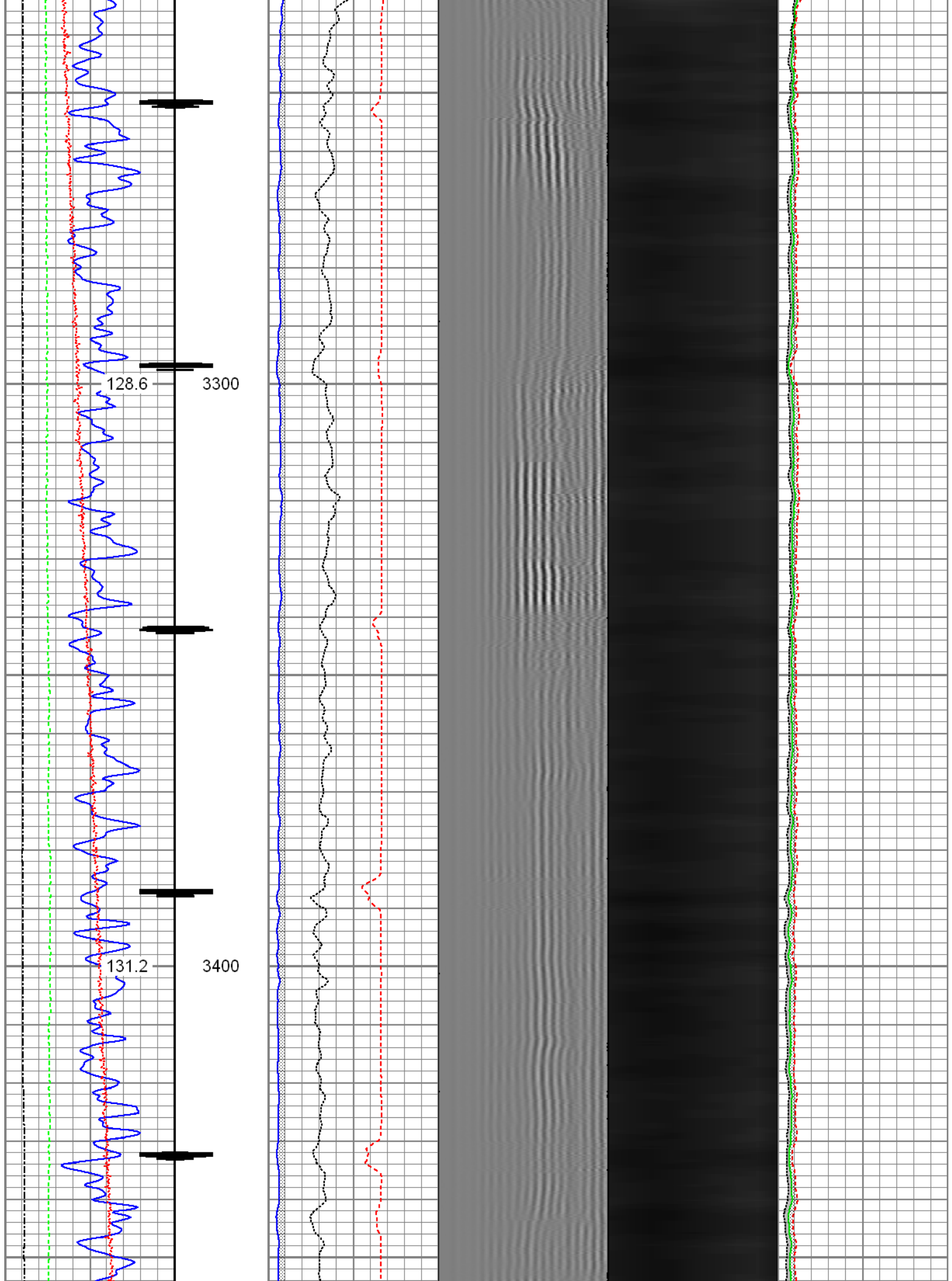


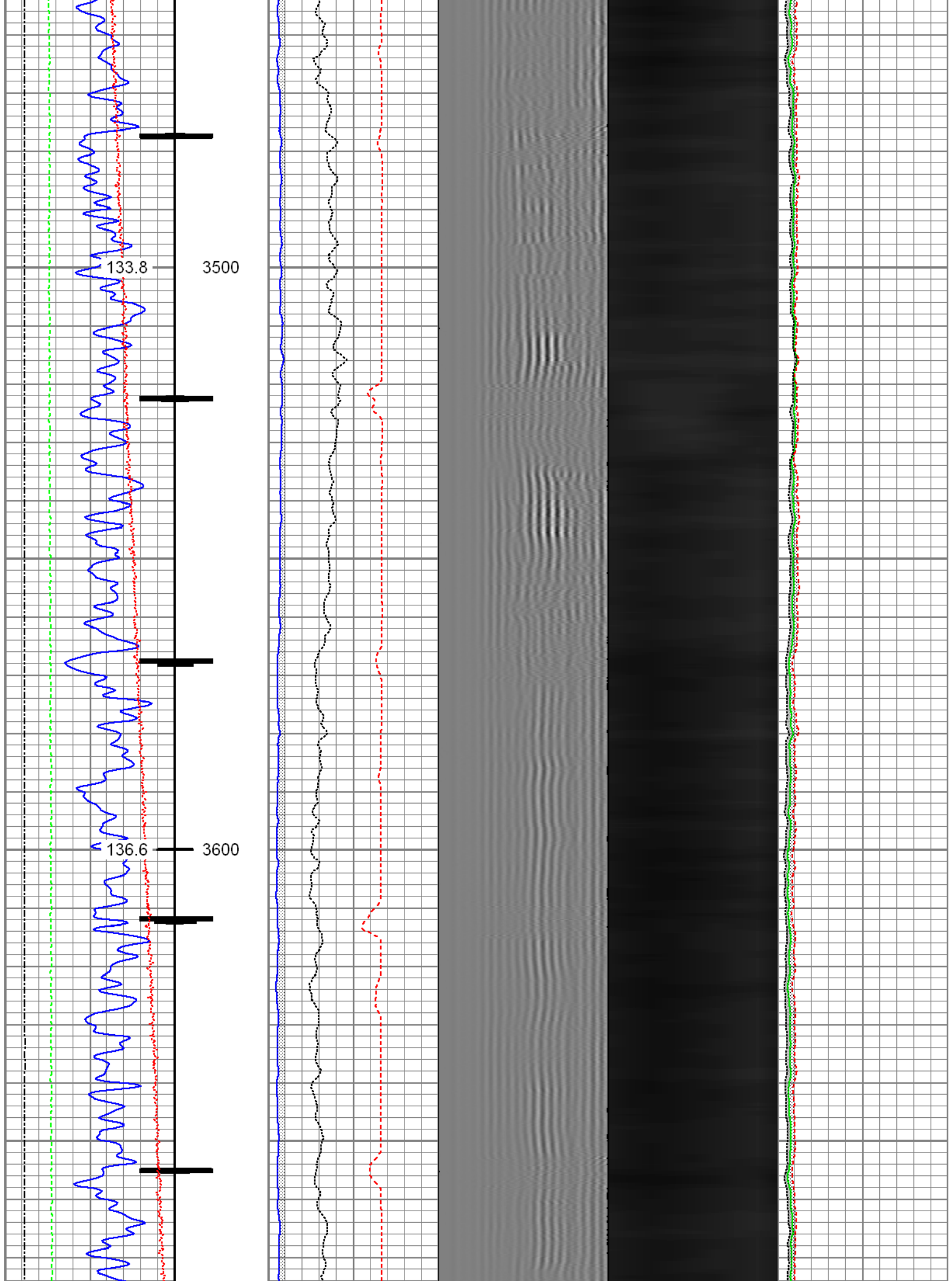


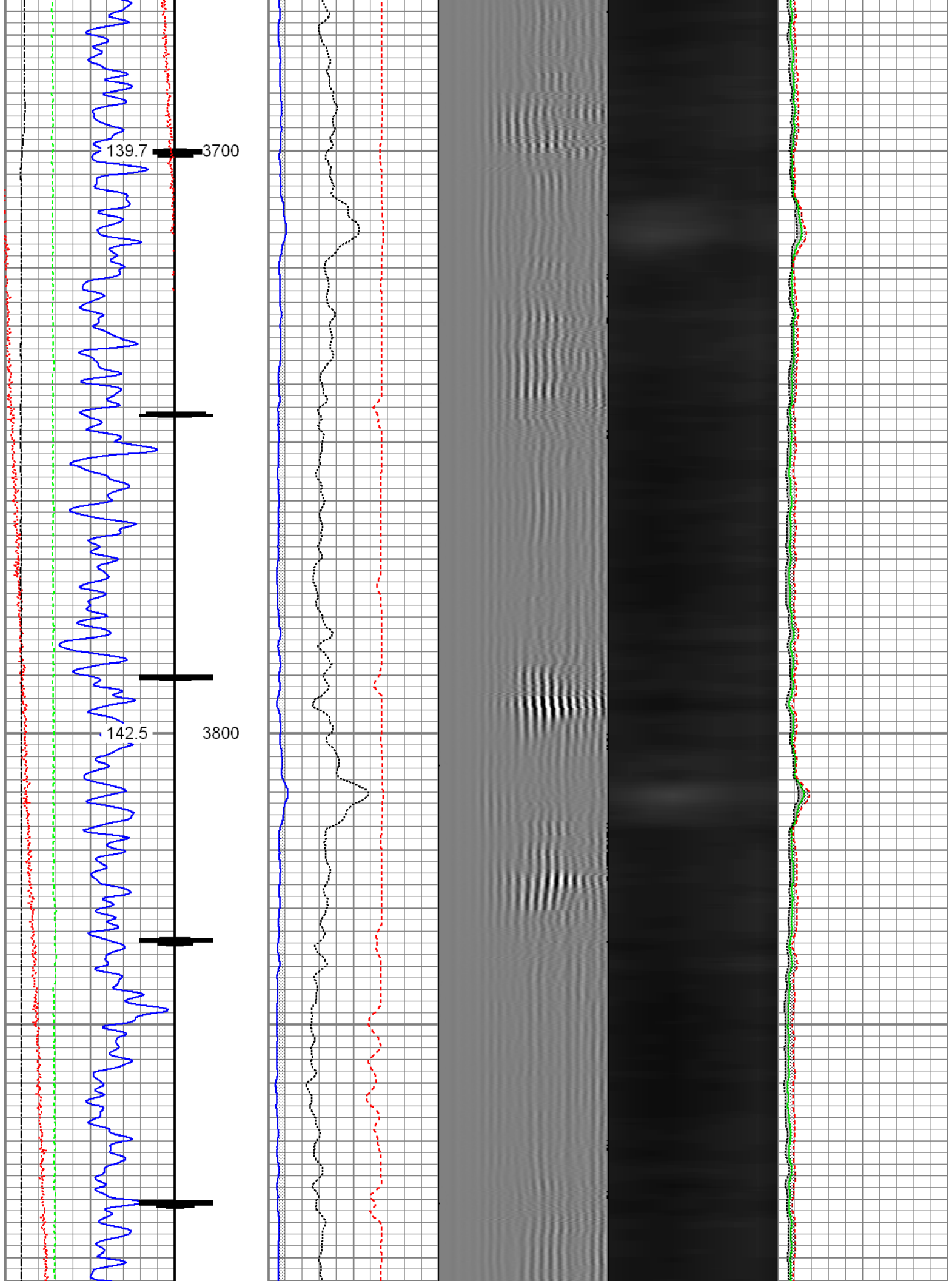


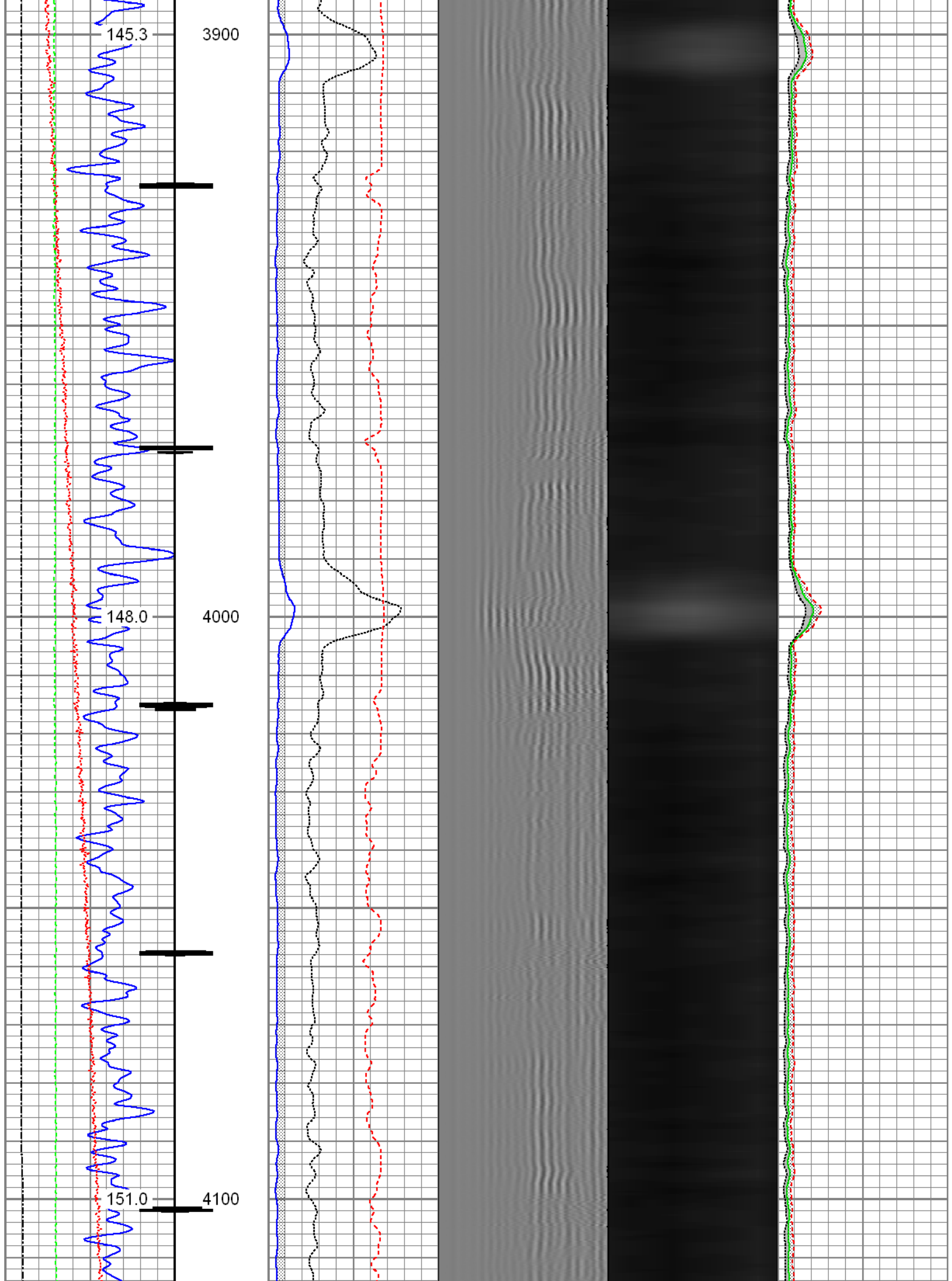


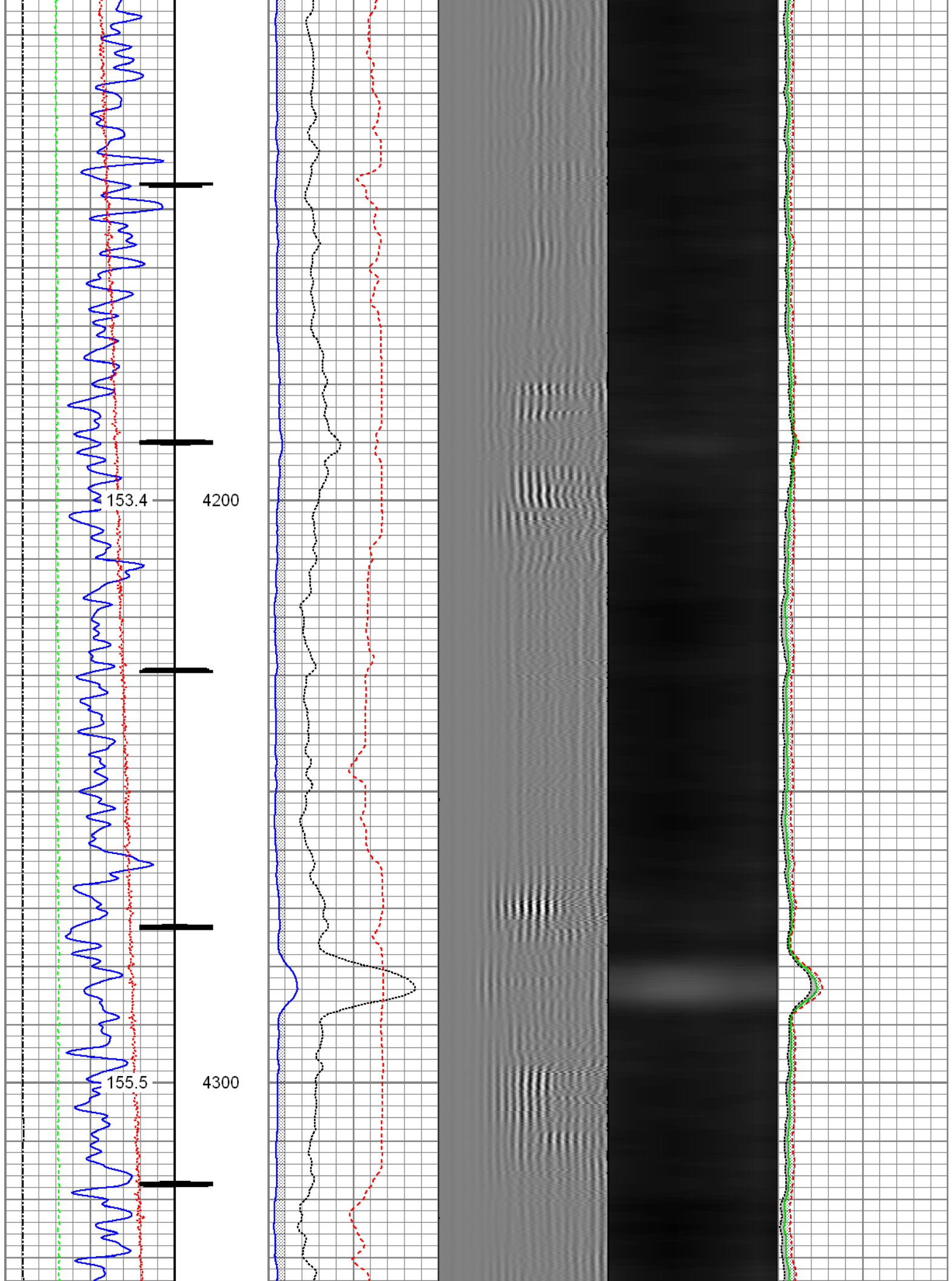


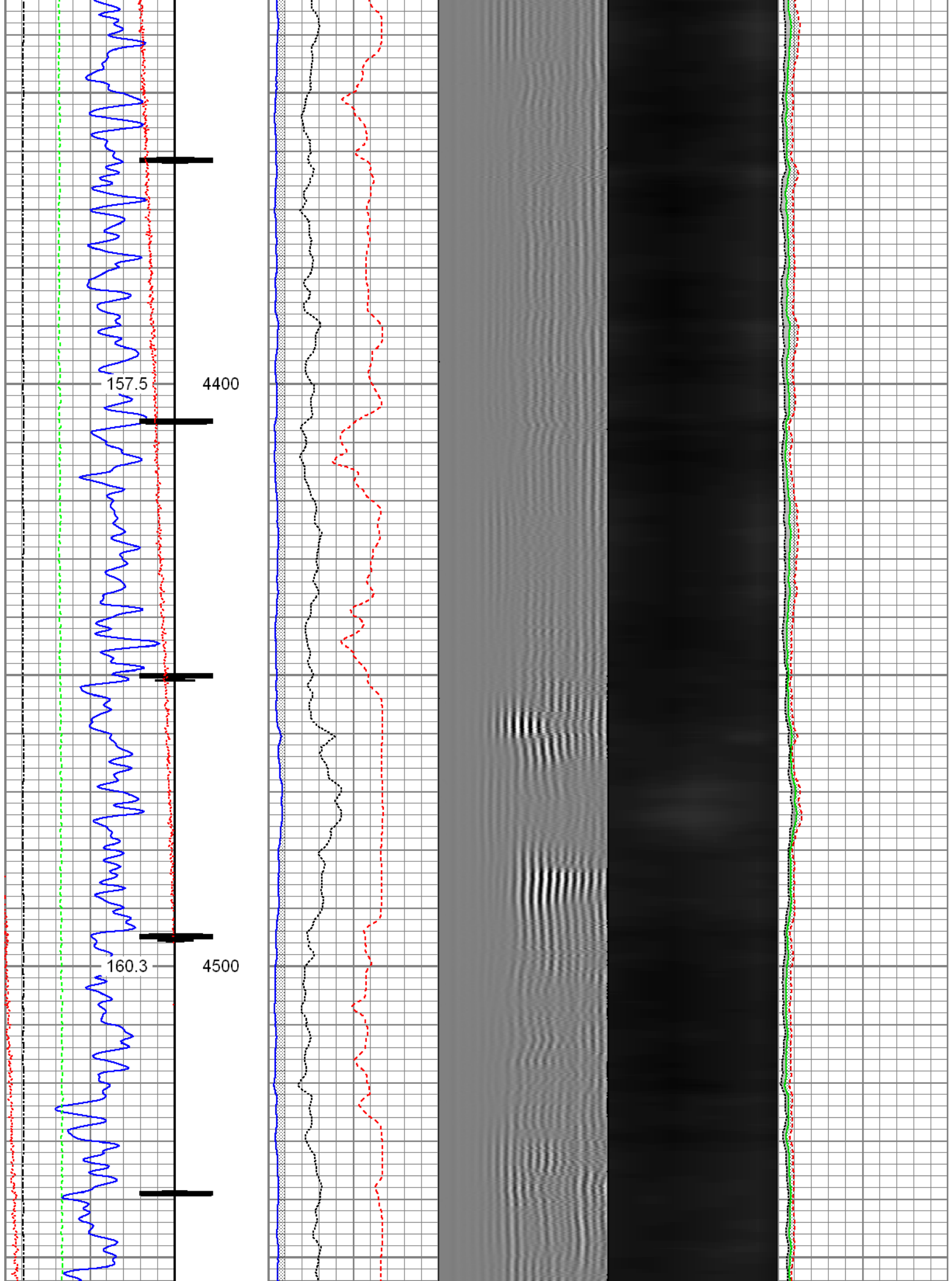


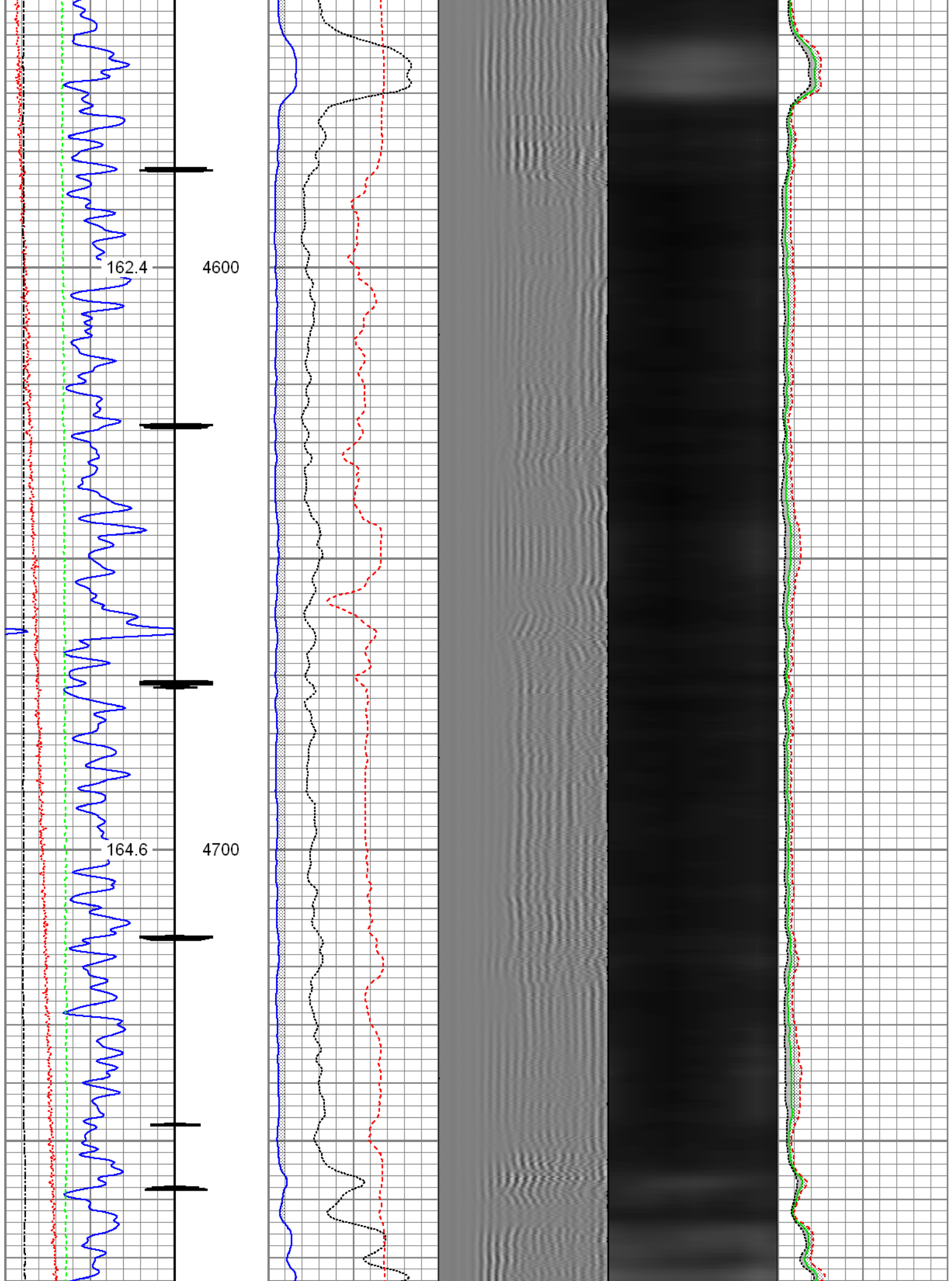


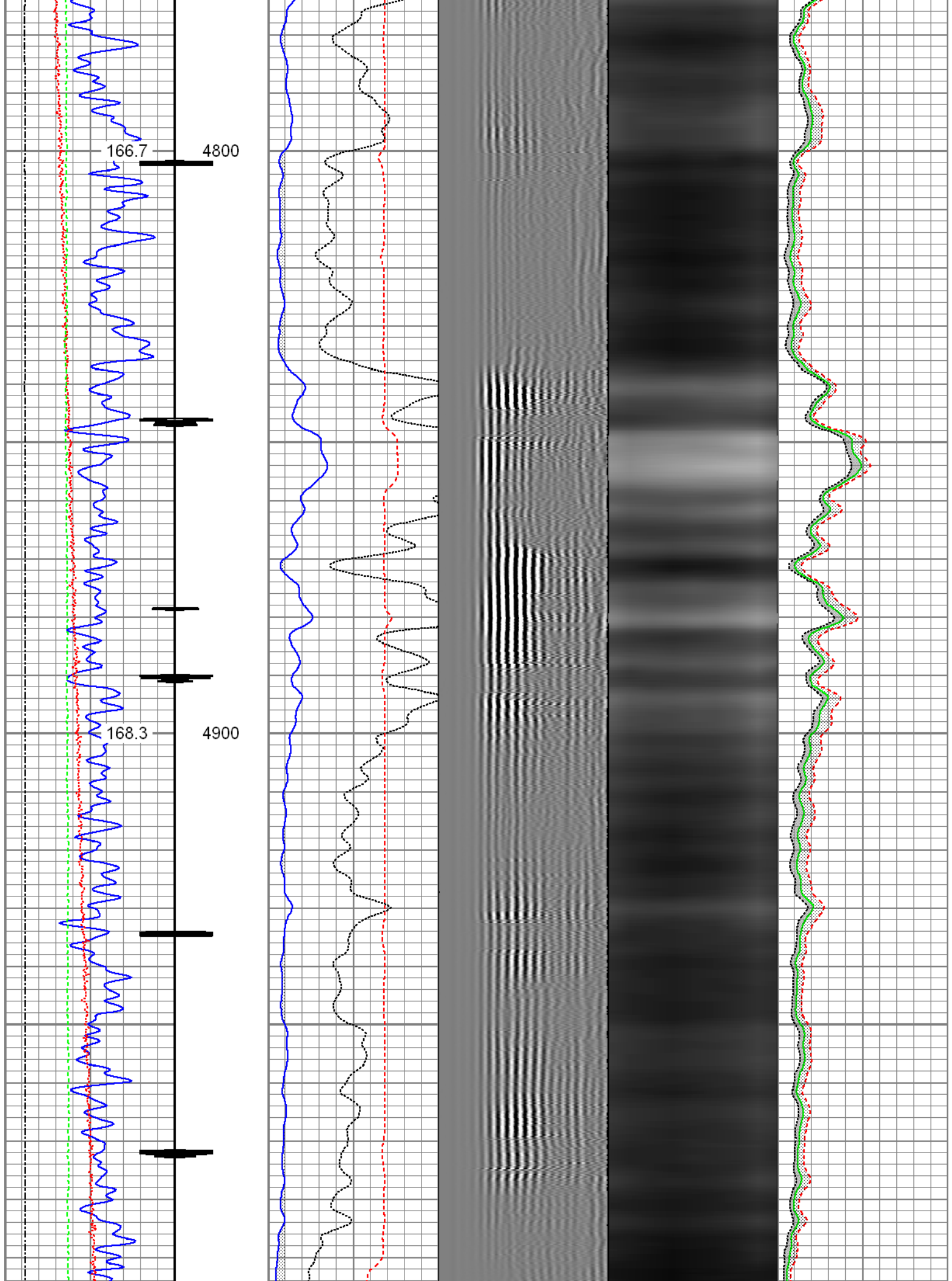


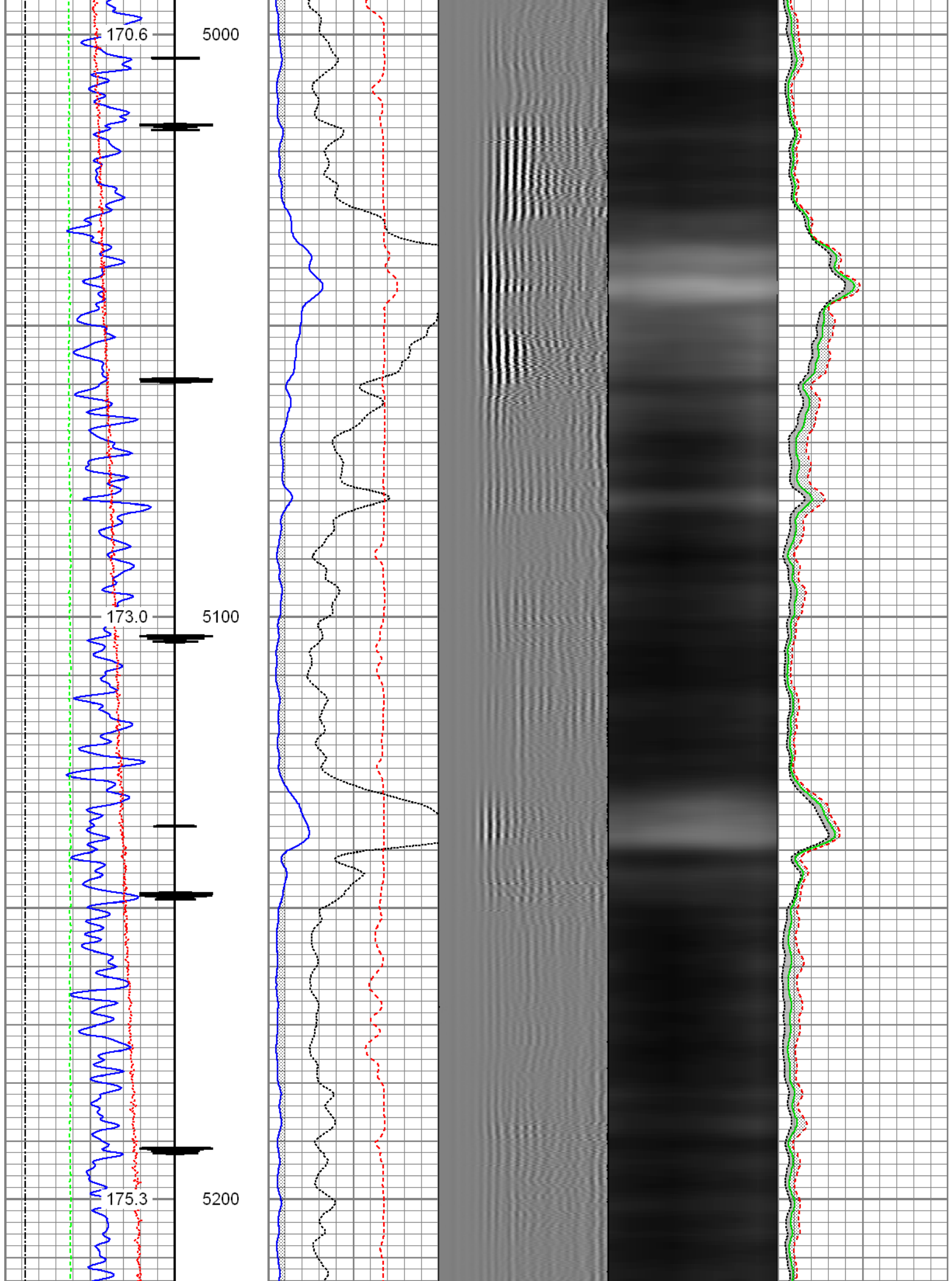


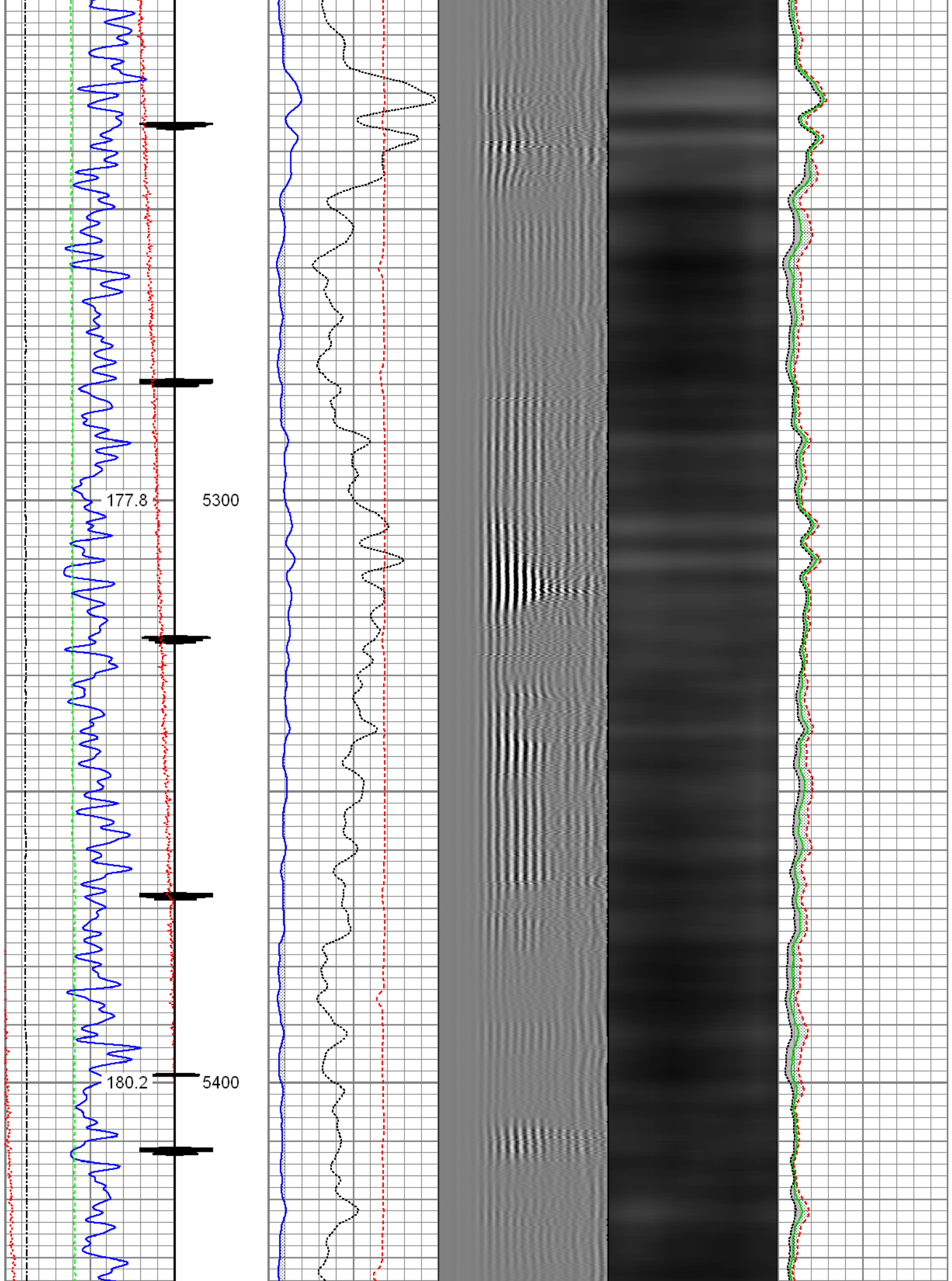


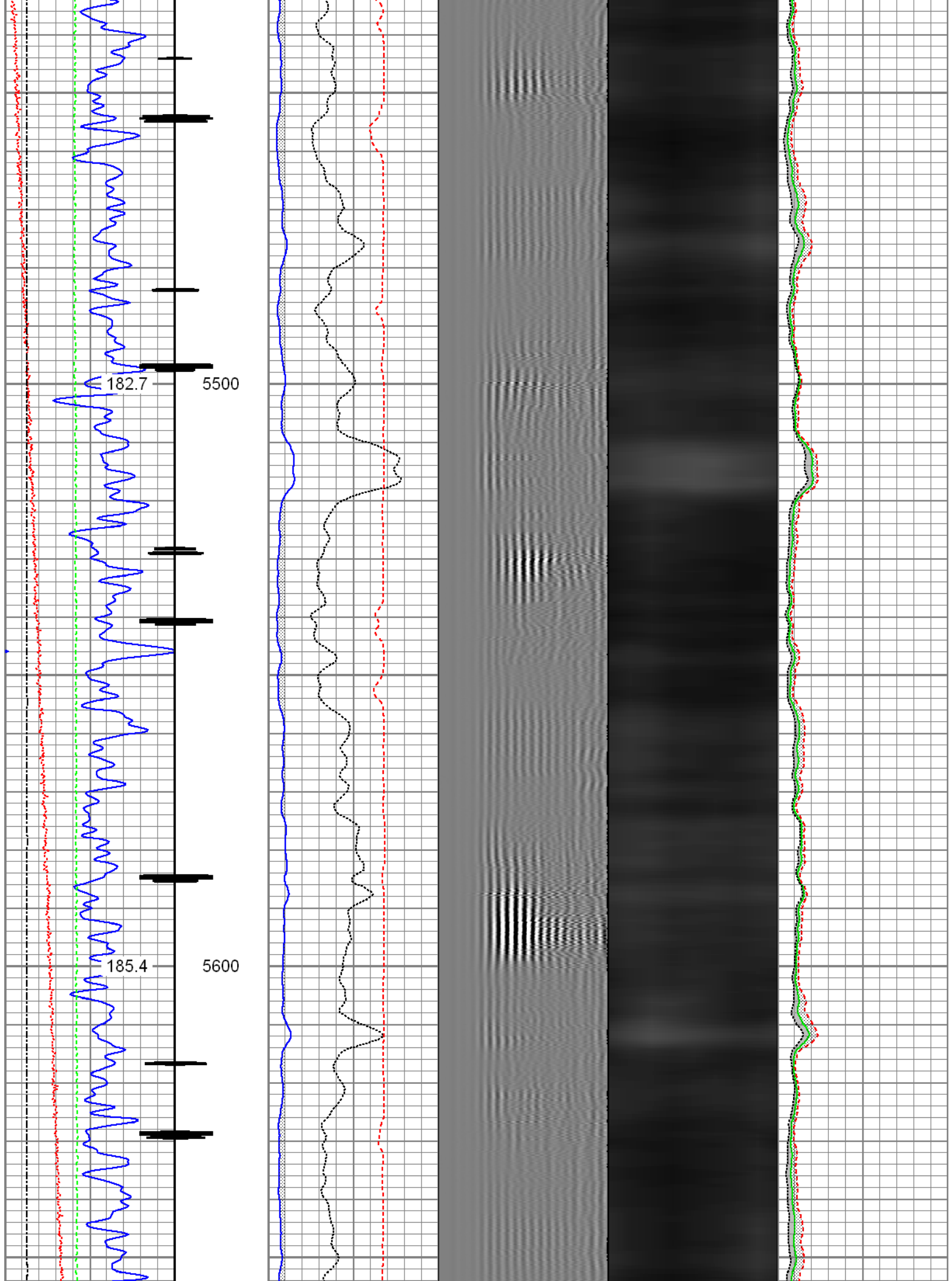


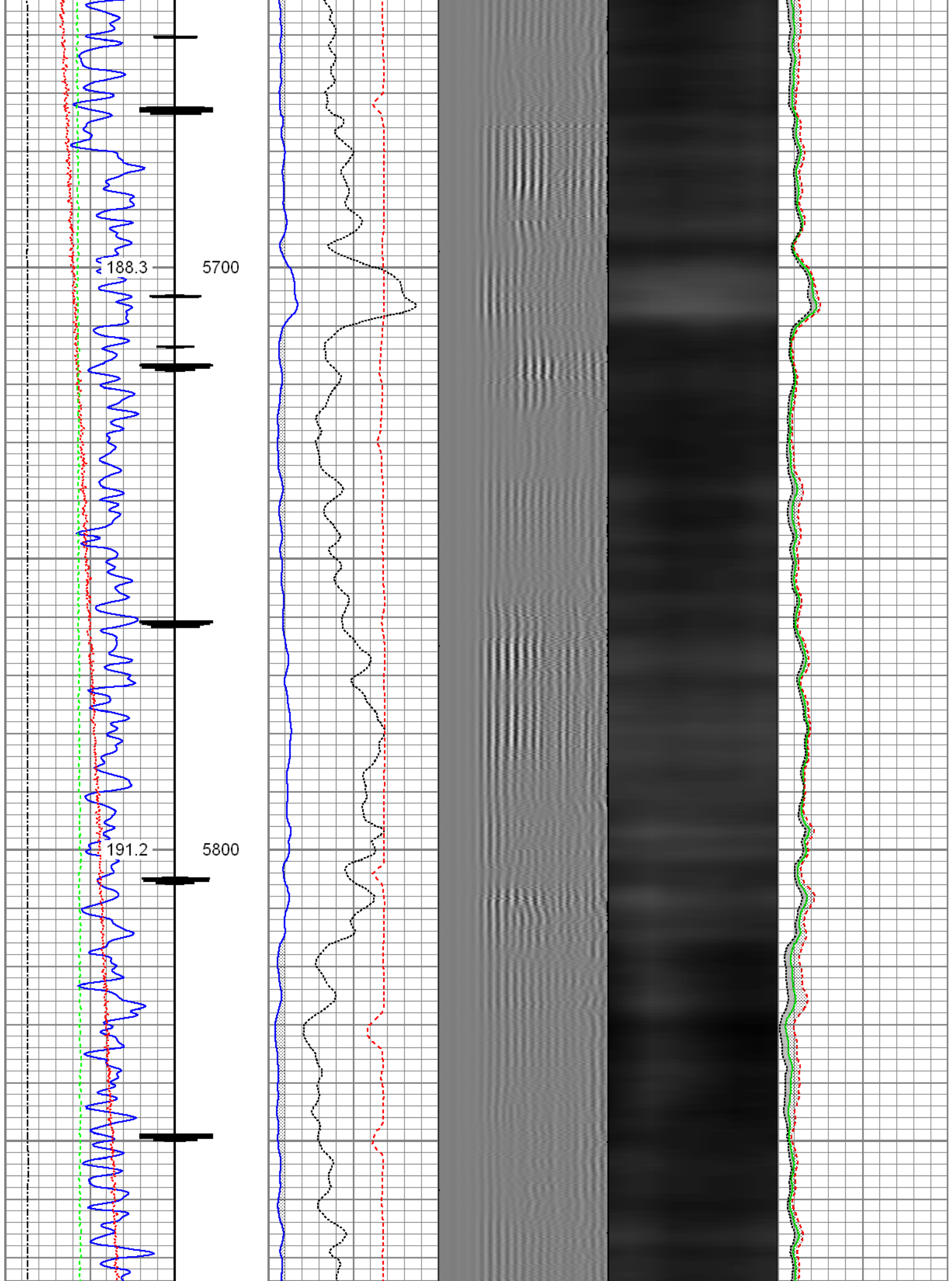


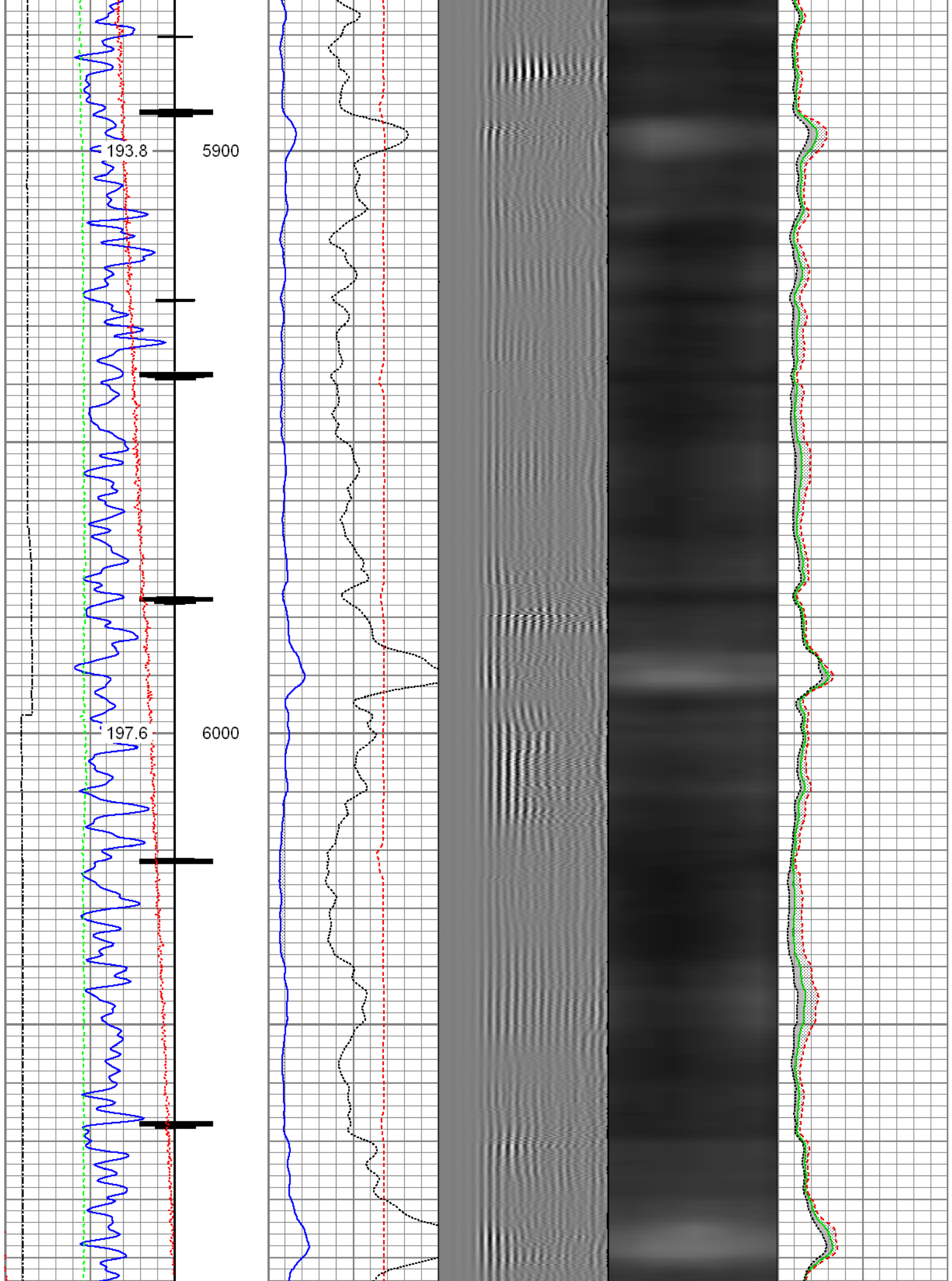


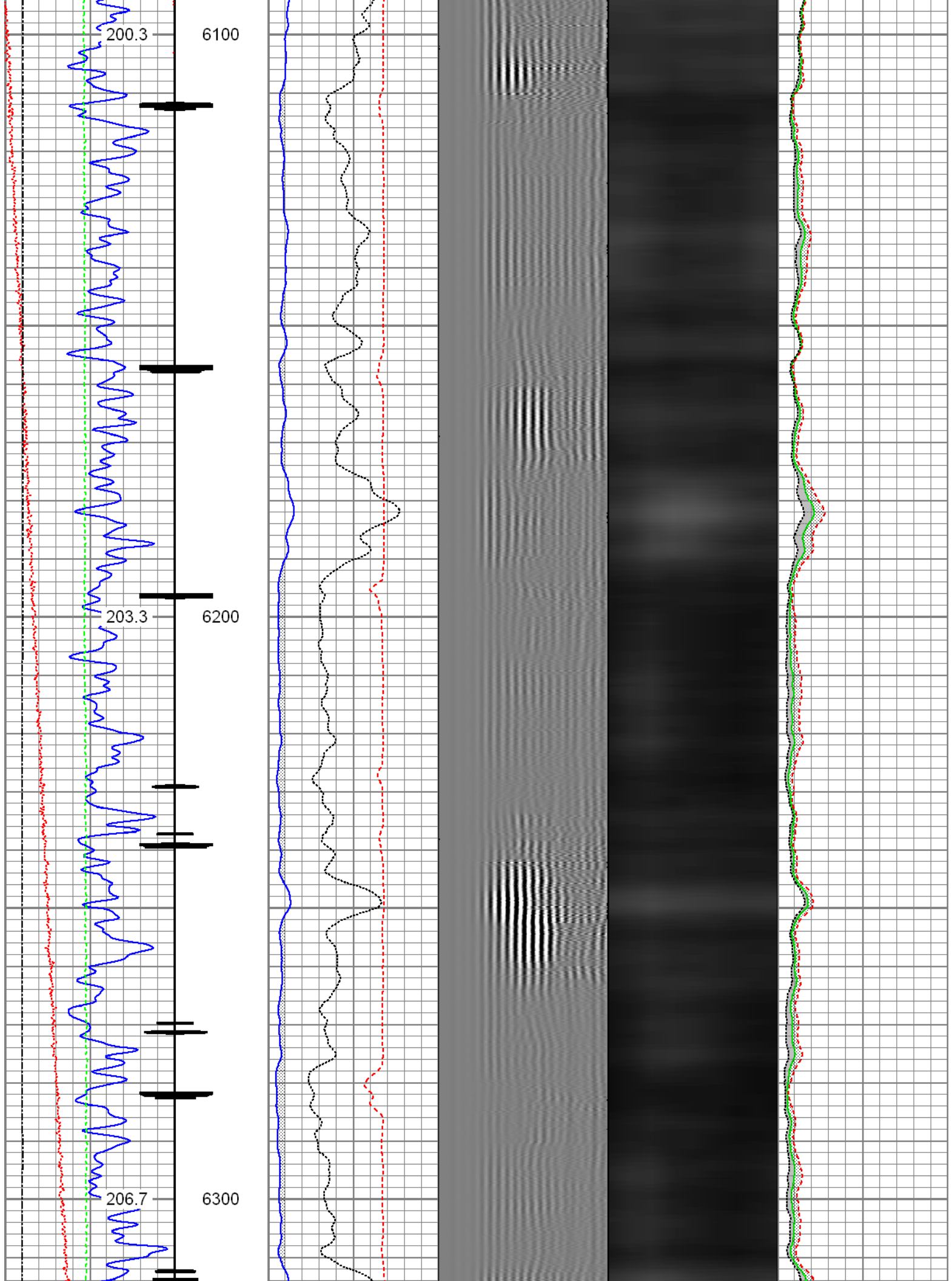


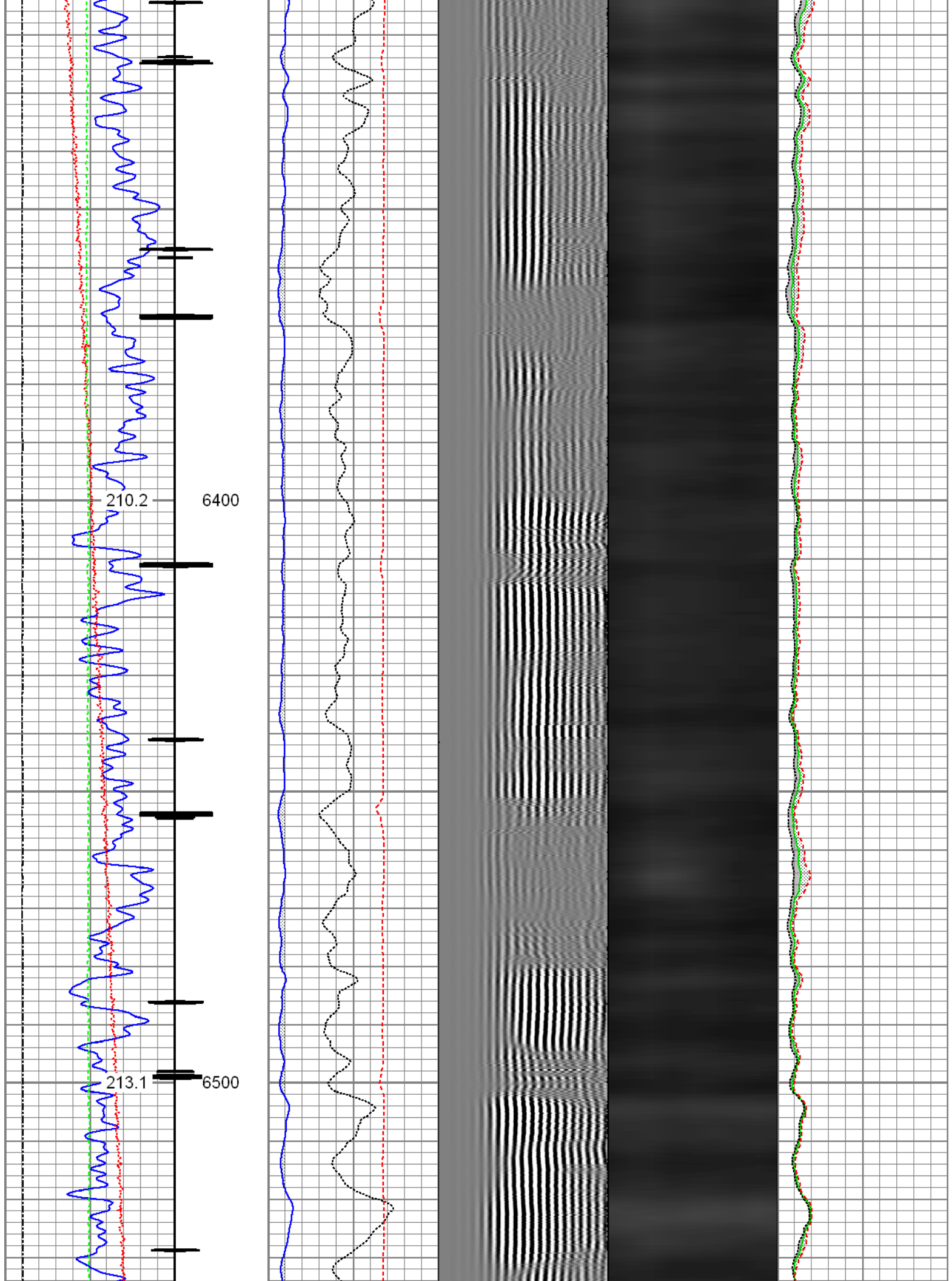


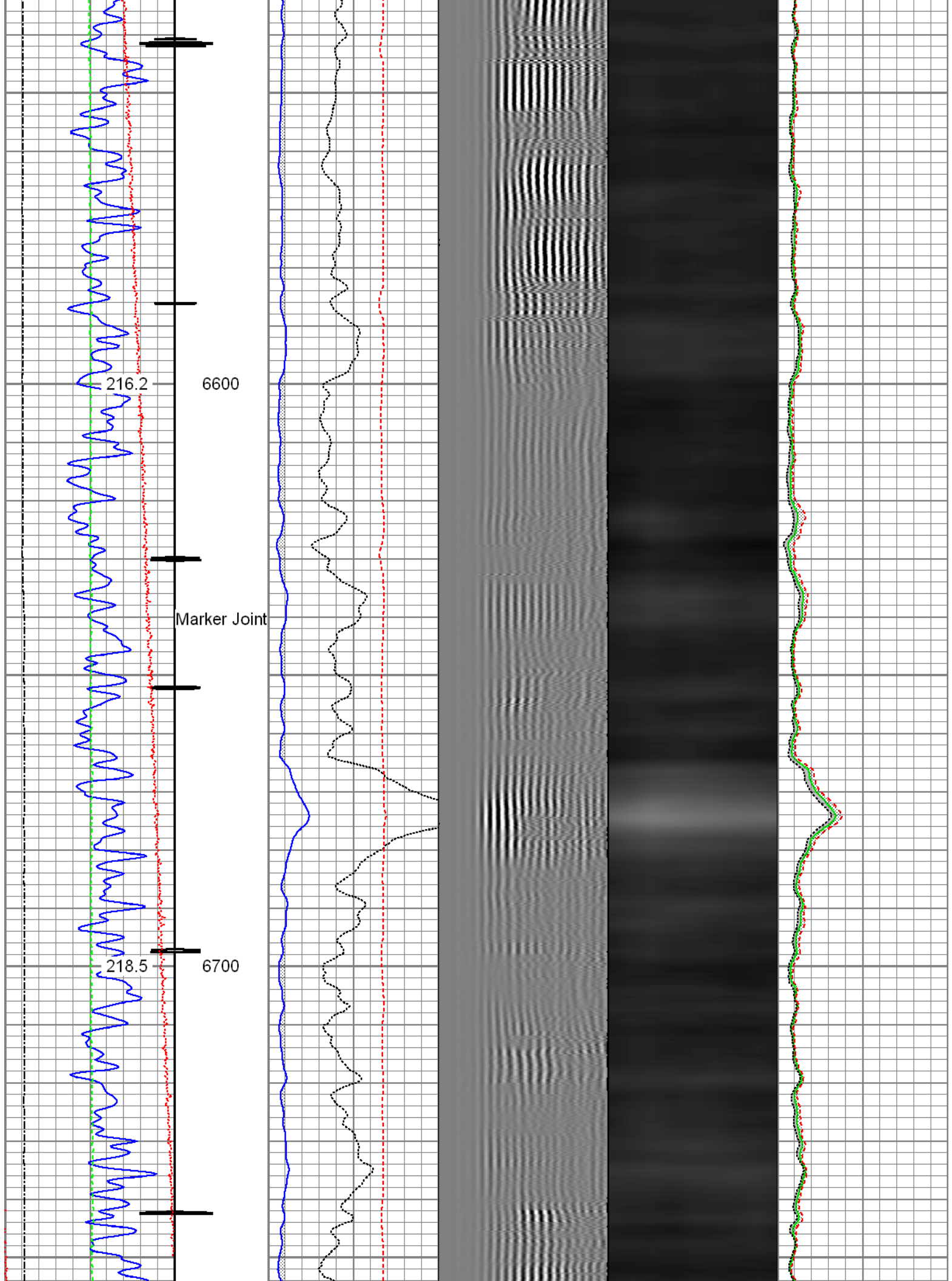


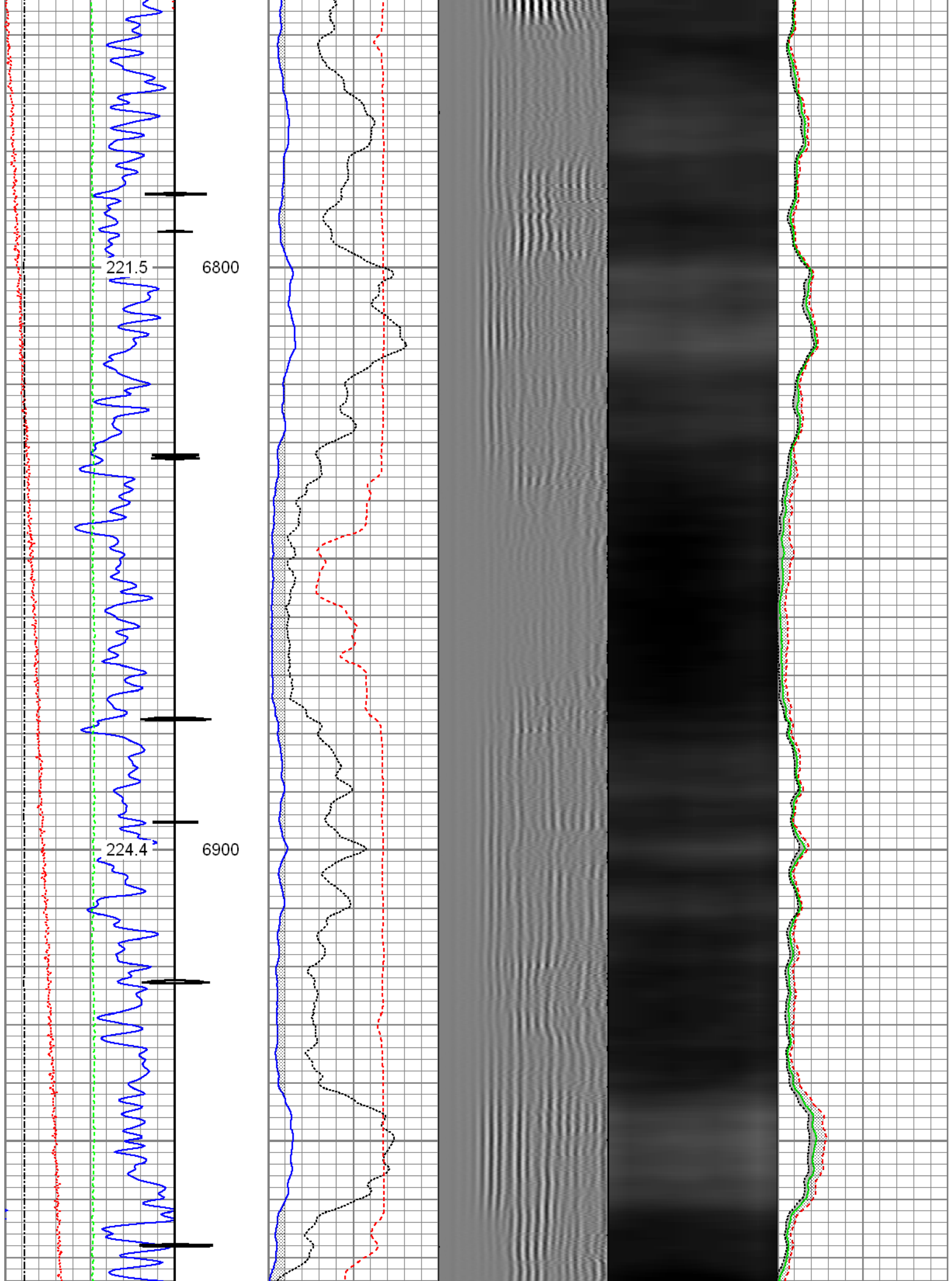


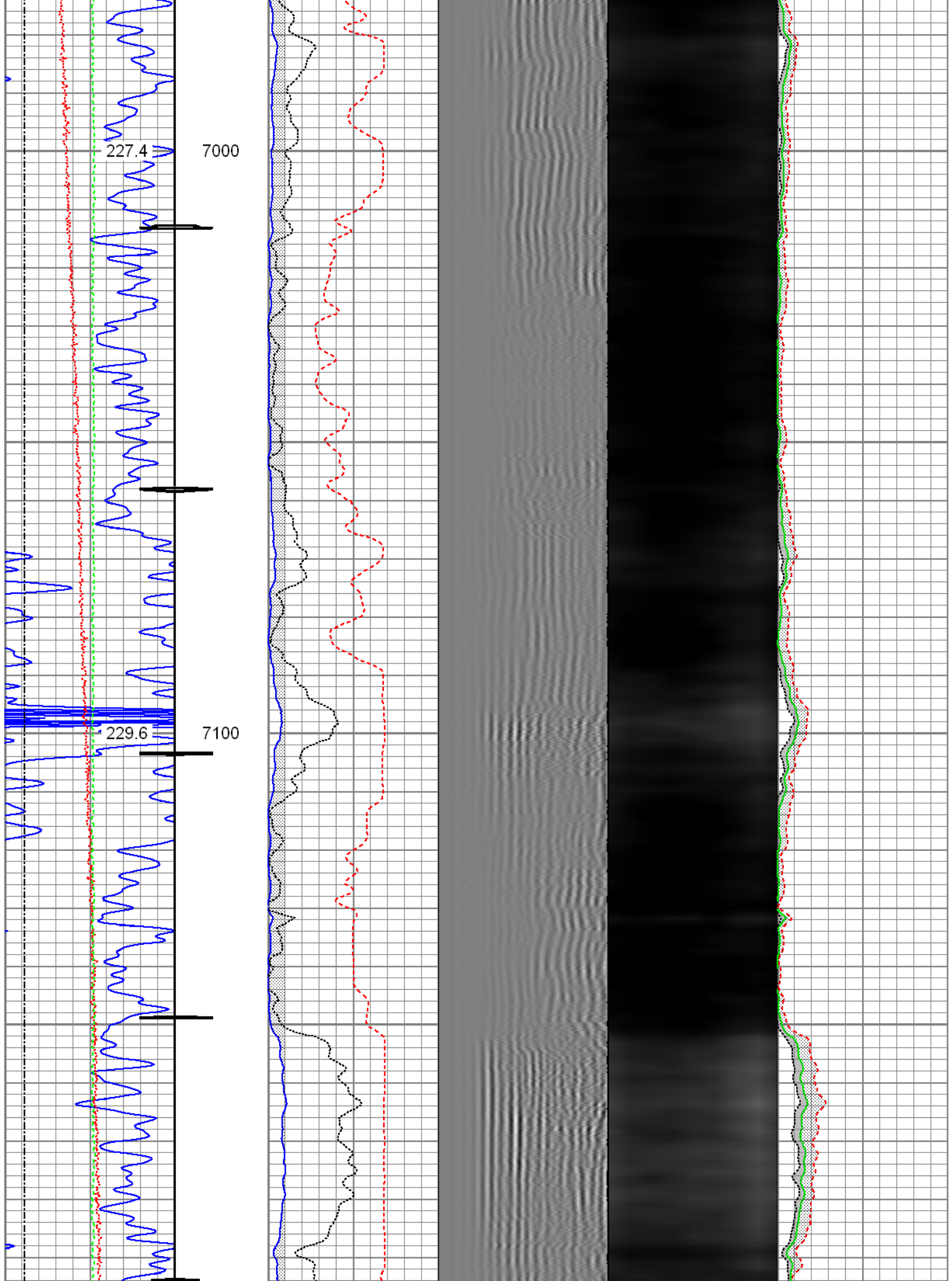


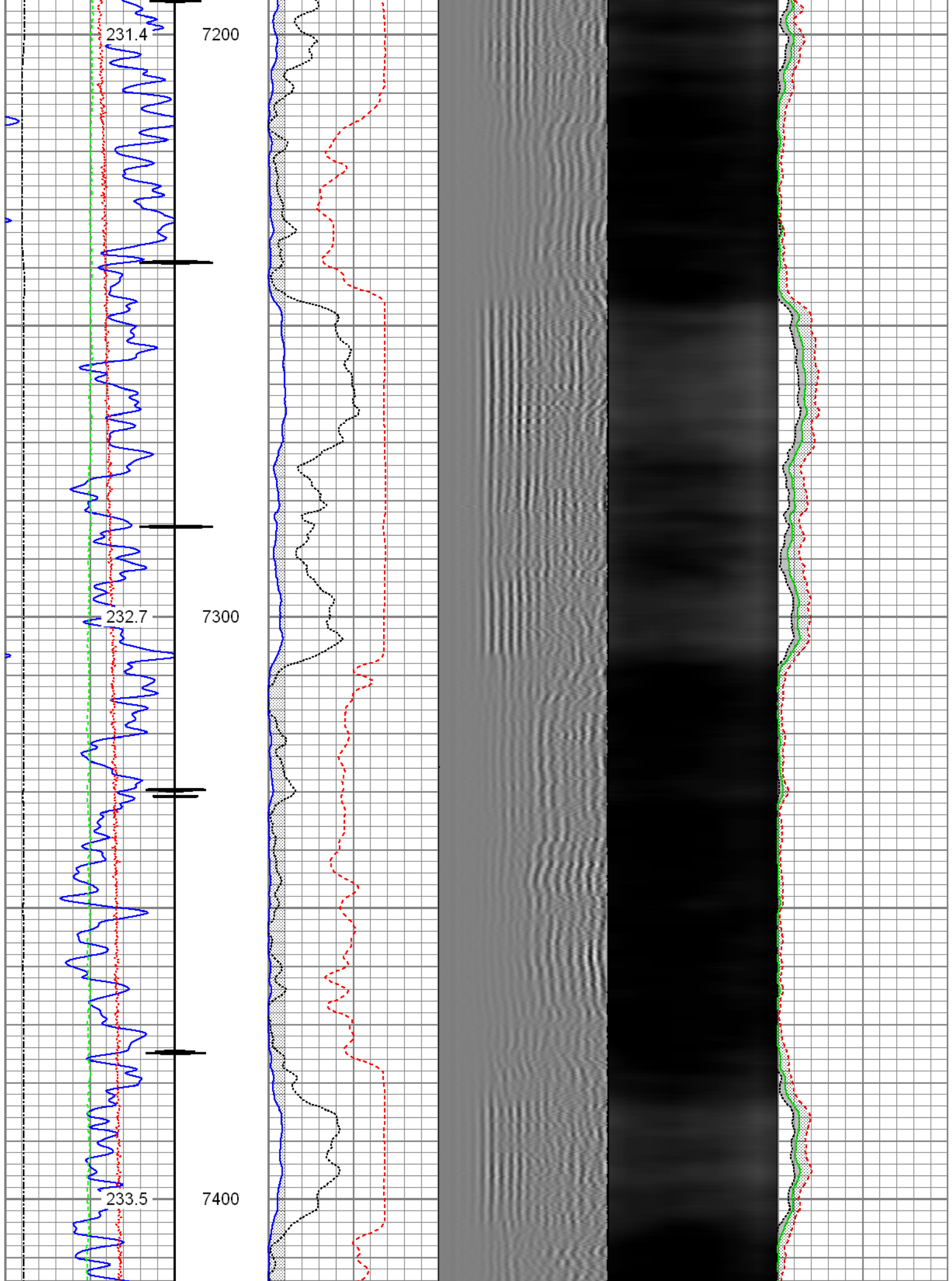


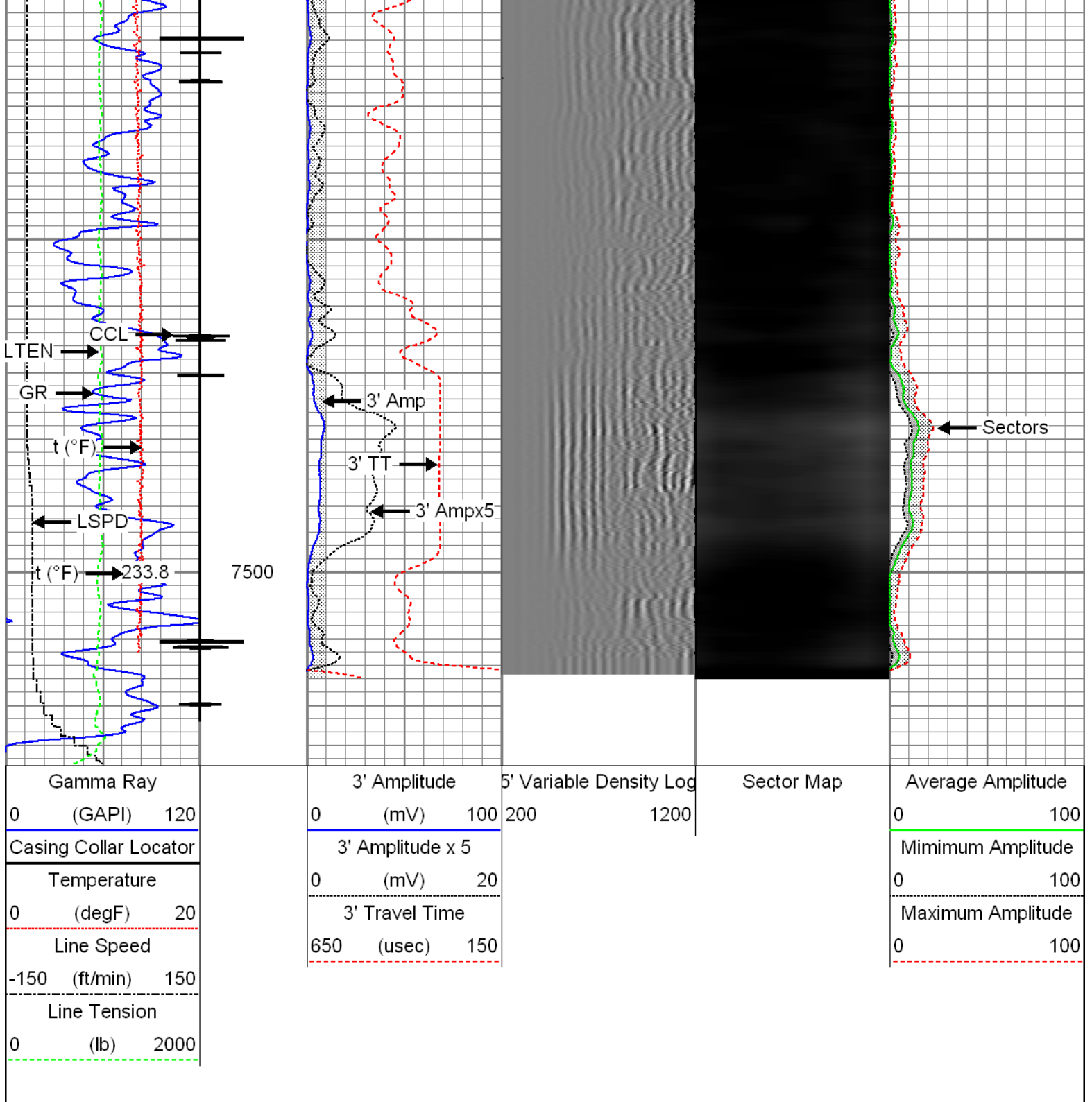








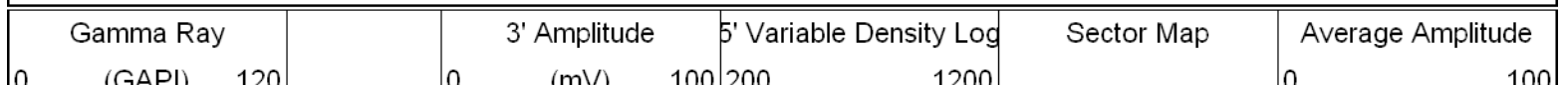




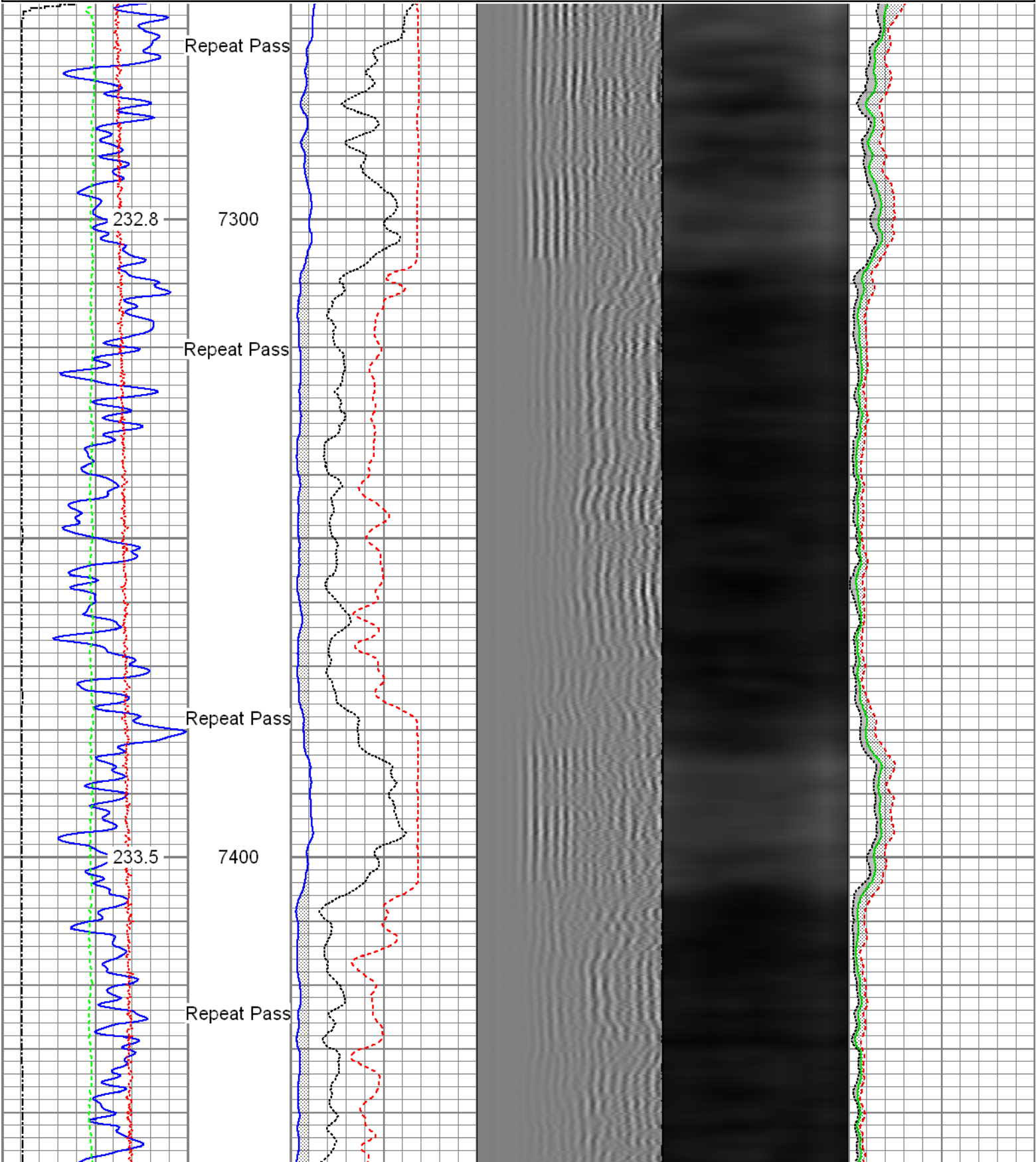
Repeat Pass

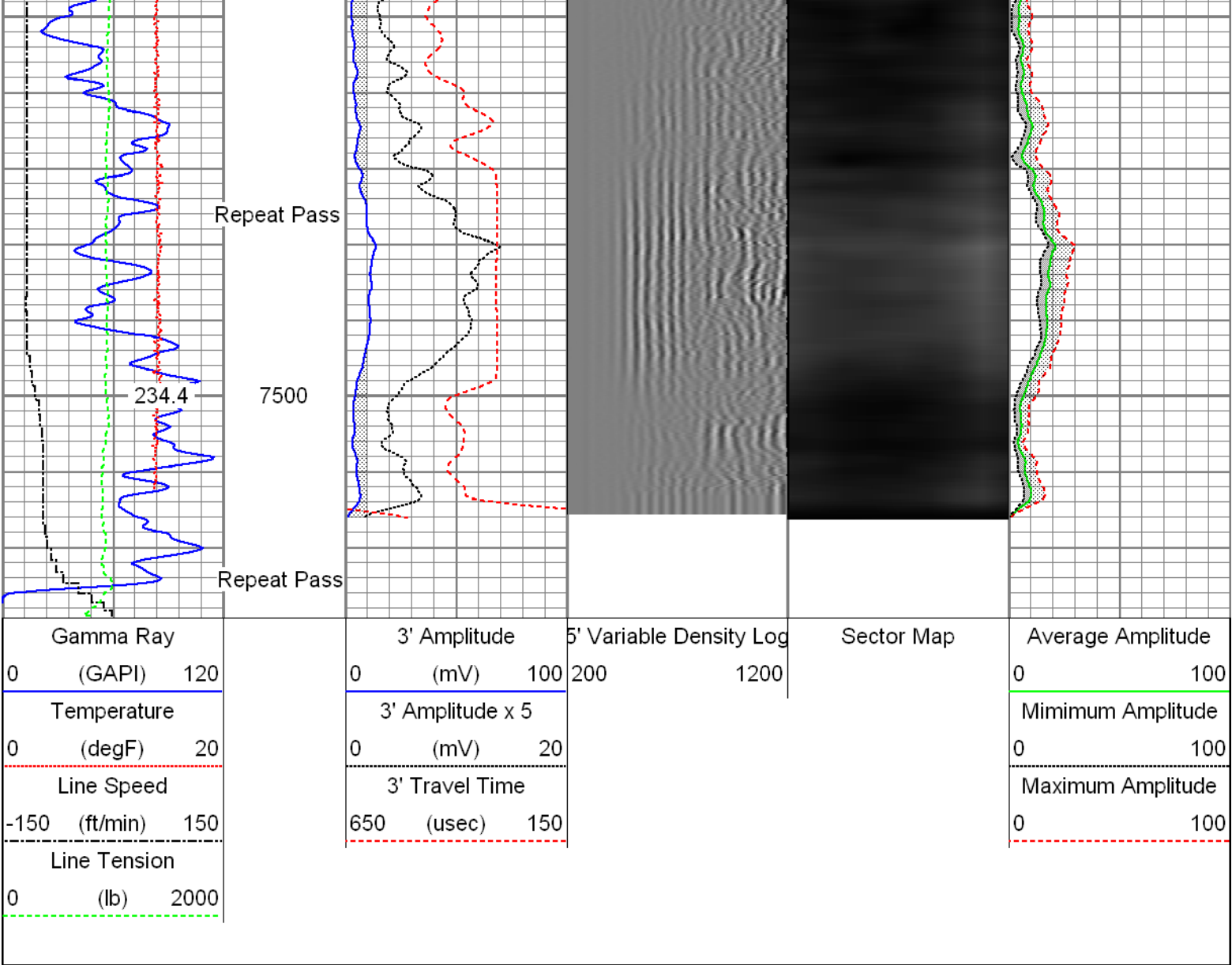
Recorded with 2800 PSI Surface Induced Pressure

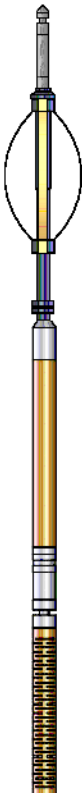

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 Presentation Format: radii
 Dataset Creation: Mon Aug 03 10:18:05 2015 by Log 7.0 B1
 Charted by: Depth in Feet scaled 1:240

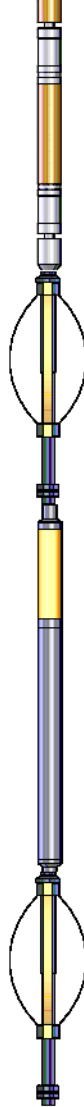


Temperature (degF)			3' Amplitude x 5 (mV)			Minimum Amplitude		
0		20	0		20	0		100
Line Speed (ft/min)			3' Travel Time (usec)			Maximum Amplitude		
-150		150	650		150	0		100
Line Tension (lb)								
0		2000						





Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			T_CH14375_1_GO Titan 1-7/16" Assembled Electric Cable Head with 1" Fishing Neck	1.03	1.44	4.00
			Probe_IL_BS_Cent Probe 2-3/4" Inline Electrical Inline Bowspring Centralizer	2.88	2.75	10.00
HeadVolt	19.49					
Temp	16.72					
WVF3FT	14.55		Probe_RADII-C-2-3/4" (FW1302-001) Probe 2-3/4" Sector Cement Bond Tool with Temperature Probe	9.19	2.75	105.00
WVFCAL	14.55					
WVES1	14.55					

WVFS1	14.55		2.88	2.75	10.00
WVFS2	14.55				
WVFS3	14.55				
WVFS4	14.55				
WVFS5	14.55				
WVFS6	14.55				
WVFS7	14.55				
WVFS8	14.55				
WVFS5FT	13.55				
CCL	6.51	Probe_CCL_GR-2.75"Digital (FW1307-038) 4.54 Probe 2-3/4" Digital CCL / Gamma Ray Combined	4.54	2.75	55.00
DCCL	6.51				
GR	3.77	Probe_IL_BS_Cent Probe 2-3/4" Inline Electrical Inline Bowspring Centralizer	2.88	2.75	10.00
Dataset: 0512341286_Anadarko_Bat 28N-9HZ_08-03-15_RBL.db: field/well/run1/main.3 Total Length: 23.40 ft Total Weight: 194.00 lb O.D.: 2.75 in					

Calibration Report		
Database File:	0512341286_Anadarko_Bat 28N-9HZ_08-03-15_RBL.db	
Dataset Pathname:	main.3	
Dataset Creation:	Mon Aug 03 12:12:16 2015 by Calc 7.0 B1	
Gamma Ray Calibration Report		
Serial Number:	FW1307-038	
Tool Model:	2.75"Digital	
Performed:	Mon Aug 03 07:59:17 2015	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.6000	GAPI/cps
Segmented Cement Bond Log Calibration Report		
Serial Number:	FW1302-001	
Tool Model:	2-3/4"	
Calibration Casing Diameter:	5.500	in

Calibration Depth:

161.923

ft

Master Calibration, performed Mon Aug 03 12:11:59 2015:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.013	0.328	0.800	71.921	225.681	-2.145
CAL	-0.003	0.502				
5'	0.018	0.264	0.800	71.921	289.569	-4.541
SUM						
S1	0.015	0.361	0.000	100.000	289.241	-4.457
S2	0.019	0.373	0.000	100.000	282.562	-5.360
S3	0.015	0.349	0.000	100.000	299.246	-4.550
S4	0.015	0.326	0.000	100.000	320.972	-4.656
S5	0.012	0.310	0.000	100.000	334.897	-3.945
S6	0.011	0.309	0.000	100.000	335.709	-3.857
S7	0.011	0.319	0.000	100.000	325.607	-3.719
S8	0.017	0.340	0.000	100.000	308.942	-5.099

Internal Reference Calibration, performed Wed Dec 31 17:00:00 1969:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	-0.003	0.502	1.000	0.000

Air Zero Calibration, performed Mon Aug 03 08:33:12 2015:

	Raw (v)		Calibrated (v)		Results	
	Zero		Zero		Offset	
3'	-0.003		0.000		0.000	
5'	-0.003		0.000		0.000	
SUM						
S1	-0.003		0.000		-0.000	
S2	-0.003		0.000		-0.000	
S3	-0.003		0.000		0.000	
S4	-0.003		0.000		0.000	
S5	-0.003		0.000		0.000	
S6	-0.003		0.000		0.000	
S7	-0.003		0.000		0.000	
S8	-0.003		0.000		-0.000	



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State	Colorado